nationalgrid

Steven P. Stucker, C.P.G.
Lead Environmental Engineer

November 30, 2017

Mr. David Szymanski
Division of Solid and Hazardous Waste
NYSDEC, Region 9
270 Michigan Avenue
Buffalo, NY 14203-2999

Re: National Grid Dewey/Kensington Service Center (Site #915144)
PRR

Dear David:

Enclosed for your review is the Periodic Review Report (PRR) for the National Grid Dewey/Kensington Service Center Site (Site No. 915144).

The PRR includes the following from the period November 1, 2016 – November 1, 2017:

- Attachment 1 – PRR
- Attachment 2 – PRR Certification Form

If you have any questions, please feel free to contact me at 315.428.5652.

Sincerely,

for SPS

Steven P. Stucker, C.P.G.
Lead Environmental Engineer

ecc: Kelly Lewandowski - NYSDEC
Lisa Montesano – NG
Devin Shay- Groundwater & Environmental Services, Inc.

300 Erie Boulevard West, C-1
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Periodic Review Report – National Grid Dewey/Kensington Service Center (Site #915144)

Reporting Period – November 01, 2016 to November 01, 2017

I. Introduction

A. **Brief Site Summary** –
The National Grid Dewey/Kensington Service Center Site (#915144) is located in Buffalo, New York. National Grid owns the property and services its customers from the active facility. Service trucks, equipment, and materials are stored and maintained on-site. A mechanic's shop, several administrative buildings, an above ground fuel island, and an employee parking lot are currently located on-site and are part of the service center.

Prior to 1992, the service center also served as a hazardous waste management facility permitted by the New York State Department of Environmental Conservation (NYSDEC) (Part 373 Permit No. 9-1402-00397/00001-0). National Grid stored spent electrical transformers containing polychlorinated biphenyl- (PCB-) laden oil, various solid wastes, and bulk waste oils on-site. Some liquid wastes were stored within underground storage tanks (USTs). The hazardous waste management facility was closed in December 1992, in accordance with a NYSDEC-approved closure plan.

During excavation activities in the mid 1990s, it was discovered that soil and groundwater were contaminated near a UST identified as Solid Waste Management Unit (SWMU) #7. Multiple USTs were subsequently removed, and an investigation including the advancement of soil borings and the installation of groundwater monitoring wells was completed. A remedial action was completed in 2002 and a long-term groundwater monitoring program was implemented.

On October 3, 2011, National Grid received official notification that the site was deleted from the New York State Registry of Inactive Hazardous Waste Disposal Sites (letter from Ms. Kelly Lewandowski, NYSDEC Chief Site Control Section, to Mr. Chuck Willard, NG SIR Director).

B. **Remedial Program Effectiveness** – During the reporting period (November 01, 2016, to November 01, 2017), the long-term remedial objectives were met for the site.

C. **Remedial Program Compliance** - The major elements within the Institutional Control/Engineering Control(s) (IC/EC) Plan are in compliance. Refer to Attachment 3 for the Annual Monitoring Report for annual groundwater sampling events.

D. **Remedial Program Recommendations** - It is recommended that no changes be made to the IC/EC Plan. It is recommended that the Project Review Report (PRR) submittal frequency (annual) remain the same. The next PRR submittal deadline would be December 1, 2018.

II. Site Overview

A. Site Location and Boundaries –

The Dewey/Kensington Service Center is an active National Grid facility, encompasses approximately 23 acres, and is generally located within the center of Buffalo, New York in a predominantly residential area. To the west are Delaware Park, Canisius College, and Forest Lawn Cemetery; to the east are Fillmore Junior High School and the Erie County Medical Center; immediately to the west are the St. Mary School and Sisters of Charity Hospital; and to the south is a four lane expressway.

The site is bordered to south by Kensington Avenue and to the north by Dewey Avenue. The New York Central Railroad tracks boarder the site to the east. The expressway runs along the western side of the site.

B. Regulatory History and Remedy Features –

In September 1992, excavation activities at the facility, in the vicinity of Building #13, revealed petroleum-impacted gravel and a broken vent line connected to an underground waste oil tank. The former waste oil tank was removed and four groundwater monitoring wells (ESI-1, ESI-2, ESI-3, and ESI-4) were installed in the vicinity of the former tank to supplement an existing monitoring well (MW-1) and to facilitate periodic groundwater monitoring in this area.

In February 1994, National Grid agreed to conduct a focused Resource Conservation and Recovery Act (RCRA) Facility Assessment- (RFA-) type soil and groundwater investigation, and a Focused Risk Assessment/ Corrective Measures Study (FRA/CMS) to address the concerns identified by the RFA.

During Fall 1994, National Grid conducted soil and groundwater investigation activities in accordance with the NYSDEC-approved *Soil and Groundwater Investigation Work Plan* (1994). These investigations showed the presence of several volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs) in groundwater at concentrations above NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 – *Ambient Water Quality Standards and Guidance Values* (NYSDEC, 1998, amended 2000). Based on these results, NYSDEC requested

implementation of the quarterly groundwater monitoring program proposed in the *SWMU #7 Soil/Groundwater Investigation Report (1994*).

The *SWMU #7 Focused Risk Assessment and Corrective Measures Study Report* (FRA/CMS Report) (1995, revised 1996) concluded that the limited action alternative (i.e., implementing a groundwater monitoring program) would adequately meet the corrective measure objective of mitigating the offsite migration of impacted groundwater. Following the initial submittal of the FRA/CMS Report, a *Groundwater Sampling and Analysis Plan* (SAP) (1996) was submitted to NYSDEC in May 1996. The May 1996 SAP was then revised based upon NYSDEC comments, and the revised SAP for the groundwater monitoring program was presented in the revised FRA/CMS Report dated June 1996.

In November 1997, National Grid entered into a Consent Order with NYSDEC to guide future site monitoring and to establish a framework for implementing additional site investigation or remediation. As mandated in the Consent Order, semiannual (spring and fall) groundwater monitoring events are conducted at SWMU #7 monitoring wells. The list of wells sampled during each groundwater monitoring event has been modified through time in response to NYSDEC requirements and the results of investigation/evaluation activities, as agreed to by NYSDEC.

The Consent Order specifies that a contingency plan must be implemented to evaluate additional remedial activities if analytical results from monitoring wells located at the property boundary indicate an exceedance of NYSDEC groundwater quality standards presented in TOGS 1.1.1 for two consecutive monitoring events. The monitoring wells designated as property boundary wells have changed, as new monitoring wells have been installed as part of the contingency plan implementation. For example, monitoring wells MW-7 and MW-9 were designated as property boundary wells in the Consent Order. In 1999, the property boundary wells included monitoring wells MW-6, MW-7, MW-11, MW-12, and MW-14. The current property boundary well arrangement includes monitoring wells MW-6, MW-11, MW-12, MW-20, MW-21, and MW-24 (installed spring 2002).

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness

A. **Evaluation of Remedy Performance** - The wells are part of the remedy performance. However, there is no current requirement for a site inspection of the existing facility buildings, fences, or fuel tanks. Based on the well inspections and analytical data, the remedy performance has been effective in protecting facility workers and the public.

IV. IC/EC Plan Compliance Report

A. IC/EC Requirements and Compliance

1. **IC/EC Controls**

   The ICs/ECs included:

   - Semi-annual groundwater monitoring well inspections of the following wells: MW-1, MW-2, MW-5, MW-6, MW-7, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-16, MW-17, MW-19, MW-20, MW-21, MW-24, MW-25, and ESI-1.
   - Semi-annual groundwater monitoring well sampling and analysis of the following wells: MW-1, MW-6, MW-9, MW-11, MW-12, MW-20, MW-21, MW-24.

2. **IC/EC Goals -** Each goal is being met and/or working effectively.

3. **IC/EC Corrective Measures –** No deficiencies were noted during the quarterly inspections.

4. **IC/EC Conclusions/Recommendations –** The program is in compliance and there are no recommendations at this time.

B. **IC/EC Certification** – Refer to PRR Form - Attachment 2 for the certification.

V. Monitoring Plan Compliance Report – The Annual Monitoring Report is enclosed as Attachment 3.

VI. Operation & Maintenance (O&M) Plan Compliance Report - Not Applicable

VII. Overall PRR Conclusions and Recommendations

A. Compliance with Site Management Plan (SMP)

1. **Requirements -** All IC/EC Plan requirements were met during this reporting period.

2. **Exposure Pathways –** There are no new completed exposure pathways resulting in unacceptable risk.

3. **Proposed Plans and Schedule to Meet Compliance –** No plan proposed.

B. **Performance and Effectiveness of the Remedy –** The remedy as described by the Record of Decision and executed by National Grid has been effective in meeting the program goals.

C. Future PRR Submittals – The frequency of PRR Submittals should remain annual. Therefore, the next PRR submittal deadline will be December 1, 2018.

VIII. Additional Guidance - Not Needed

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 915144

Site Name Niagara Mohawk Dewey Ave. Service Sta.

Site Address: 144 Kensington Avenue Zip Code: 14214
City/Town: Buffalo
County: Erie
Site Acreage:

Reporting Period: November 01, 2016 to November 01, 2017

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 915144 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
89.16-1-2	National Grid	Monitoring Plan O&M Plan
89.16-1-6	National Grid	Monitoring Plan O&M Plan

Box 4

Description of Engineering Controls

None Required

Not Applicable/No EC's

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 915144

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Mark A. Boorady, PE (print name) at 5 Technology Place, Suite 4, East Syracuse, NY (print business address),

am certifying as Owners representative from National Grid (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

_____ _____

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification — Date

Steven P. Stucker, C.P.G.
Lead Environmental Engineer

November 30, 2017

Mr. David Szymanski
Division of Solid and Hazardous Waste
NYSDEC, Region 9
270 Michigan Avenue
Buffalo, NY 14203-2999

Re: National Grid Dewey/Kensington Service Center (Site #915144)
2017 Annual Groundwater Monitoring Report

Dear David:

Enclosed for your review is the Annual Groundwater Monitoring Report for the National Grid Dewey/Kensington Service Center Site (Site No. 915144).

The Annual Groundwater Report includes the following from the period November 1, 2016- November 1, 2017:

- Figures: Site Location Map, Site Map, and Groundwater Monitoring Map
- Tables: Groundwater Elevations and Groundwater Analytical Results – Total PCBs
- Appendices: Groundwater Monitoring Field Data and Groundwater Monitoring Laboratory Data

If you have any questions, please feel free to contact me at 315.428.5652.

Sincerely,

for SPS

Steven P. Stucker, C.P.G.
Lead Environmental Engineer

cc: Kelly Lewandowski - NYSDEC
Lisa Montesano – NG
Devin T. Shay- Groundwater & Environmental Services, Inc.

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Dewey/Kensington Service Center
144 Kensington Avenue, Buffalo, New York

2017 Annual Groundwater Monitoring Report

Prepared by:

GES

5 Technology Place, Suite 4
East Syracuse, New York 13057

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Appendices

Section 1
Introduction

1.1 Introduction

This annual report presents the results of the groundwater sampling and analysis activities conducted by Groundwater and Environmental Services, Inc. (GES) at the National Grid Dewey/Kensington Service Center in Buffalo, New York (the site). These activities were completed as part of ongoing investigations of a former underground storage tank (UST), identified as Solid Waste Management Unit (SWMU) #7. The April 2017 and October 2017 groundwater monitoring events were conducted in conformance with the Order on Consent (Consent Order) Index Number R9-4407-96-09, dated November 19, 1997, between National Grid and the New York State Department of Environmental Conservation (NYSDEC) to monitor the potential migration of impacted groundwater associated with SWMU #7. As further discussed in Section 1.3, the SWMU #7 groundwater monitoring program was modified as identified in NYSDEC's July 22, 2003 letter, which presents comments on the *2002 Soil Investigation and Spring/Fall 2002 Groundwater Monitoring Report*.

1.2 Background and Site Investigation History

The Dewey/Kensington Service Center is an active facility located at 144 Kensington Avenue between Dewey and Kensington Avenues in Buffalo, New York (**Figure 1-1**). The service center previously included a hazardous waste management facility permitted by NYSDEC (Part 373 Permit No. 9-1402-00397/00001-0). The hazardous waste management facility was closed in December 1992 in accordance with a NYSDEC-approved closure plan.

In September 1992, excavation activities at the facility in the vicinity of Building #13 revealed petroleum-impacted gravel and a broken vent line connected to an underground waste oil tank. The waste oil tank was subsequently removed, and four groundwater monitoring wells (ESI-1, ESI-2, ESI-3, and ESI-4) were installed in the vicinity of the former tank to supplement an existing monitoring well (MW-1) and to facilitate periodic groundwater monitoring in this area. **Figure 1-2** illustrates relevant site features and the locations of soil borings and monitoring wells.

In February 1994, National Grid agreed to conduct a focused Resource Conservation and Recovery Act (RCRA) Facility Assessment- (RFA-) type soil and groundwater investigation, and a Focused Risk Assessment/ Corrective Measures Study (FRA/CMS) to address the concerns identified by the RFA.

During Fall 1994, National Grid conducted soil and groundwater investigation activities in accordance with the NYSDEC-approved *Soil and Groundwater Investigation Work Plan* (1994). These investigations showed the presence of several volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs) in groundwater at concentrations above NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 – *Ambient Water Quality Standards and Guidance Values* (NYSDEC, 1998, amended 2000). Based on these results, NYSDEC requested implementation of the quarterly groundwater monitoring program proposed in the *SWMU #7 Soil/Groundwater Investigation Report (1994*).

The *SWMU #7 Focused Risk Assessment and Corrective Measures Study Report* (FRA/CMS Report) (1995, revised 1996) concluded that the limited action alternative (i.e., implementing a groundwater

monitoring program) would adequately meet the corrective measure objective of mitigating the offsite migration of impacted groundwater. Following the initial submittal of the FRA/CMS Report, a *Groundwater Sampling and Analysis Plan* (SAP) (1996) was submitted to NYSDEC in May 1996. The May 1996 SAP was then revised based upon NYSDEC comments, and the revised SAP for the groundwater monitoring program was presented in the revised FRA/CMS Report dated June 1996.

In November 1997, National Grid entered into a Consent Order with NYSDEC to guide future site monitoring and to establish a framework for implementing additional site investigation or remediation. As mandated in the Consent Order, semi-annual (spring and fall) groundwater monitoring events are conducted at SWMU #7 monitoring wells. The list of wells sampled during each groundwater monitoring event has been modified through time in response to NYSDEC requirements and the results of investigation/evaluation activities, as agreed to by NYSDEC.

The Consent Order specifies that a contingency plan must be implemented to evaluate additional remedial activities if analytical results from monitoring wells located at the property boundary indicate an exceedance of NYSDEC groundwater quality standards presented in TOGS 1.1.1 for two consecutive monitoring events. The monitoring wells designated as property boundary wells have changed, as new monitoring wells have been installed as part of the contingency plan implementation. For example, monitoring wells MW-7 and MW-9 were designated as property boundary wells in the Consent Order. In 1999, the property boundary wells included monitoring wells MW-6, MW-7, MW-11, MW-12, and MW-14. The current property boundary well arrangement includes monitoring wells MW-6, MW-11, MW-12, MW-20, MW-21, and MW-24 (installed spring 2002). Refer to Figure 1-2 for well locations. Monitoring well construction details are summarized in **Table 1-1**.

The table below summarizes instances when groundwater samples from two consecutive groundwater sampling events exhibited the presence of constituents in groundwater above TOGS standards and guidance values in the property boundary wells. The table also presents the corresponding NYSDEC-approved contingency plan activities that were conducted in response to such instances.

Consecutive Sampling Events with Property Boundary Well TOGS Standards and Guidance Value Exceedances	**Corresponding Contingency Plan Activity**
Fall 1997 and Spring 1998: PCBs in groundwater samples collected from monitoring well MW-9.	Conducted MW-9 supplemental investigation, including installing additional monitoring wells MW-13, MW-14, and MW-15 in October 1998.
Spring 1999 and Fall 1999: PCBs in groundwater samples collected from monitoring wells MW-9 and MW-14.	Conducted supplemental site investigation, including research of site history and installing additional monitoring wells MW-16, MW-17, MW-18, MW-19, MW-20, and MW-21 in August and September 2000.
Fall 2000 and Spring 2001: PCBs in groundwater samples collected from monitoring wells MW-9 and MW-14.	Conducted 2002 soil investigation, including advancing soil borings (SB-101, MW-22, SB-102, SB-103, SB-104, SB-105, SB-106, MW-23, and SB-107), installing monitoring wells (MW-22, MW-23, and MW-24) and sampling and fingerprint analysis of light non-aqueous phase liquid (LNAPL) in monitoring well ESI-1.

On October 3, 2011, National Grid received official notification that the site was deleted from the New York State Registry of Inactive Hazardous Waste Disposal Sites (letter from Ms. Kelly Lewandowski, NYSDEC Chief Site Control Section, to Mr. Chuck Willard, NG SIR Director).

1.3 Modifications to the Groundwater Monitoring Program

In the 2002 Investigation Report, modifications to the SWMU #7 groundwater monitoring program were recommended. The recommendations were based on the results of the 2002 soil investigation, the 2002 groundwater monitoring events, a review of previous soil and groundwater results, and LNAPL fingerprinting. NYSDEC approved the recommendations presented in the 2002 Report (with select modifications) in a July 22, 2003 letter to National Grid. The recommendations, inclusive of NYSDEC's modifications, were as follows:

- Discontinue VOC analysis except at monitoring wells ESI-1 and MW-16. LNAPL (if present) in monitoring well ESI-1 will be removed. If LNAPL is not present for three consecutive monitoring events in monitoring well ESI-1, groundwater will be sampled and analyzed for VOCs annually. To monitor the conditions downgradient of monitoring well ESI-1, groundwater from monitoring well MW-16 will be sampled and analyzed for VOCs annually. If VOCs are detected in groundwater at MW-16, additional VOC analysis will be required from monitoring wells located downgradient of MW-16.
- Discontinue lead analysis for all monitoring wells.
- Continue PCB analysis at select monitoring wells (i.e., the property boundary wells, MW-1, and MW-9).
- Discontinue data validation (for all groundwater samples collected) for every groundwater monitoring event.
- Continue to sample and measure groundwater levels from the monitoring wells, as summarized in Section 3 - Schedule.

Per NYSDEC's July 27, 2011 letter to National Grid, semi-annual groundwater sampling events will continue. However, both monitoring events will be documented in a single annual report to be submitted in the fall of each year.

Section 2

Groundwater Monitoring Activities

2.1 Groundwater Well Gauging

For the April 18, 2017, and October 18-19, 2017 events, static groundwater levels (presented in Table 1-1) were measured prior to groundwater sample collection to evaluate groundwater flow direction. Groundwater levels were obtained from 19 of the groundwater monitoring wells associated with SWMU #7 (MW-1, MW-2, MW-5, MW-6, MW-7, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-16, MW-17, MW-19, MW-20, MW-21, MW-24, MW-25, and ESI-1). During the April 2017 well gauging event, data was not collected at MW-7 due to a car parked on top of the well.

The groundwater flow direction is generally toward the south. Refer to **Figure 2-1** for the general groundwater flow direction.

2.2 Groundwater Analytical Results

For the April 2017 and October 2017 events, groundwater samples were analyzed for PCBs. In addition, field measurements of pH, temperature, conductivity, dissolved oxygen, turbidity, and oxidation-reduction potential were obtained prior to sample collection. The groundwater monitoring field data is included in **Appendix A**.

Eight monitoring wells (MW-1, MW-6, MW-9, MW-11, MW-12, MW-20, MW-21, and MW-24) were sampled and analyzed for PCBs during the April 2017 and October 2017 events. Analytical results were compared to the New York State ambient water quality standards and guidance values and groundwater effluent limitations presented in TOGS 1.1.1 (0.09 parts per billion for total PCBs).

For the April 2017 sampling event, PCBs were detected in one of the eight groundwater samples collected from site groundwater monitoring wells (16.2 parts per billion [ppb] in the sample collected from MW-9). Additionally, the sample for MW-1 showed a detection above the method detection limit but below the reporting limit. For the October 2017 sampling event, PCBs were not detected in any of the eight groundwater samples collected from site wells.

Total PCB results from the groundwater monitoring events are presented in **Table 2-1**. **Appendix B** presents the laboratory analytical reports.

2.3 LNAPL Observation

Prior to groundwater purging and sample collection activities, each monitoring well was gauged with an oil/water interface probe to measure the presence or absence of LNAPL. LNAPL was not observed at any of the monitoring wells during the April 2017 event. Trace amounts of LNAPL were detected at wells ESI-1 and MW-16 for the October 2017 event.

2.4 Other Operations Maintenance and Monitoring Activities

During each semi-annual groundwater sampling event, the sorbent boom was checked at monitoring well ESI-1.

Section 3
Schedule

3.1 Schedule

Based on the results of the groundwater monitoring program and the recommendations presented in the 2002 Investigation Report (subsequently modified by the NYSDEC's July 22, 2003 response letter); the modified groundwater monitoring program, consisting of semi-annual (spring and fall) groundwater monitoring events, will be continued. The scope of the monitoring program is summarized in the following table.

Monitoring Wells for Continued Groundwater Sampling	Monitoring Wells for Groundwater Level Measurement Only
ESI-1 (VOC analysis)*	MW-2
MW-1 (PCB analysis) ***	MW-5
MW-6 (PCB analysis) ***	MW-17
MW-9 (PCB analysis) ***	MW-10
MW-11 (PCB analysis) ***	MW-13
MW-12 (PCB analysis) ***	MW-15
MW-16 (VOC analysis – fall only)	MW-17
MW-20 (PCB analysis) ***	MW-197
MW-21 (PCB analysis) ***	
MW-24 (PCB analysis) ***	

Notes:

* One groundwater sample will be collected from monitoring well ESI-1 only if LNAPL is not present for three consecutive sampling events.

*** Monitoring well will be sampled twice a year.

The next semi-annual groundwater monitoring event is scheduled for April 2018. The NYSDEC Project Manager will be notified at least one week in advance of the event. Reporting will be annual (submitted after the fall event) as part of the Periodic Review Report.

Section 4
Conclusions and Recommendations

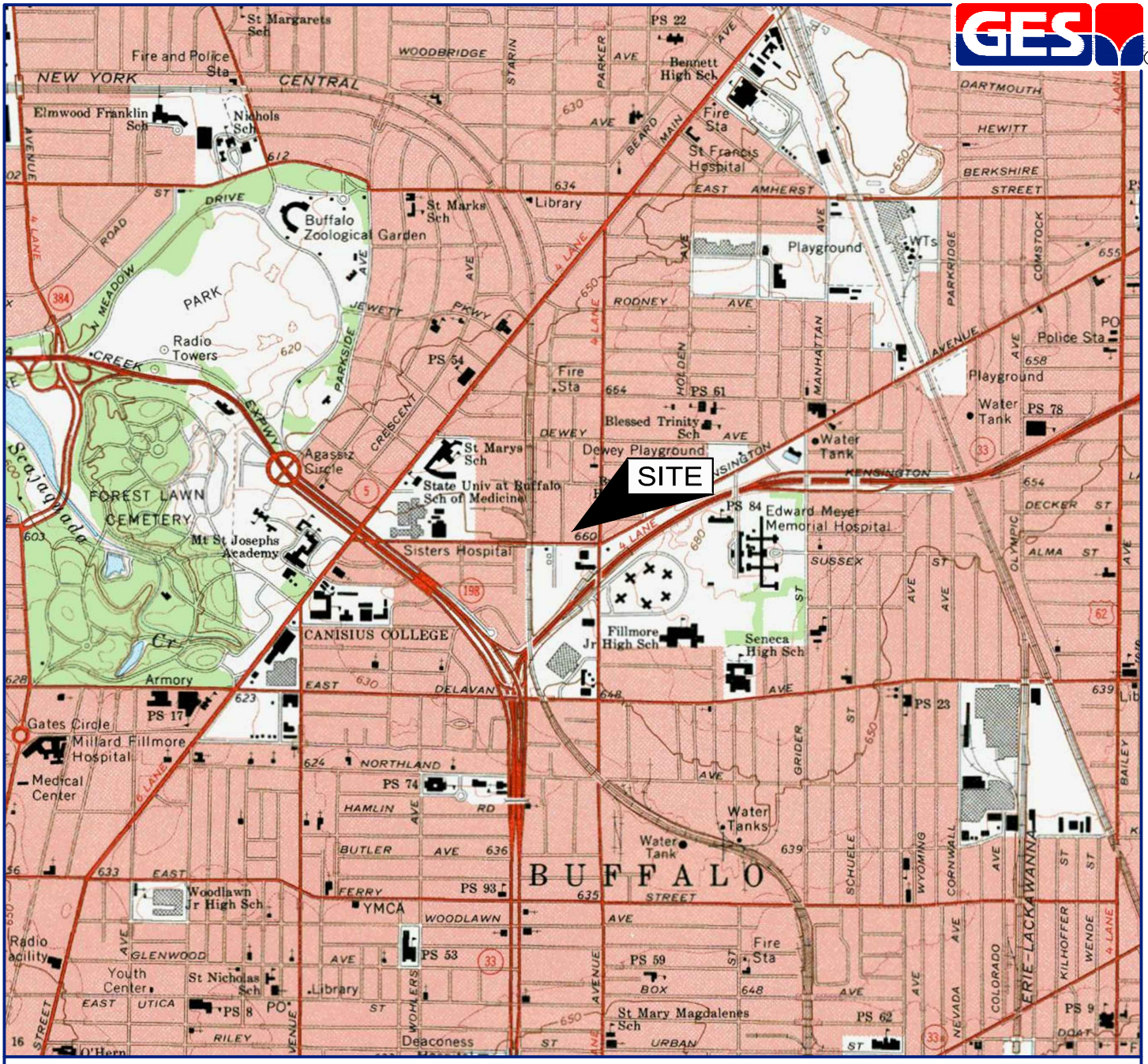
4.1 Conclusions

Eight monitoring wells were sampled and analyzed for PCBs during the April 2017 and October 2017 events (MW-1, MW-6, MW-9, MW-11, MW-12, MW-20, MW-21, and MW-24). For the April 2017 sampling event, PCBs were detected in the groundwater sample collected from one of the eight site groundwater monitoring wells (MW-9). For the October 2017 sampling event, PCBs were not detected in any of the groundwater samples collected from the eight site groundwater monitoring wells.

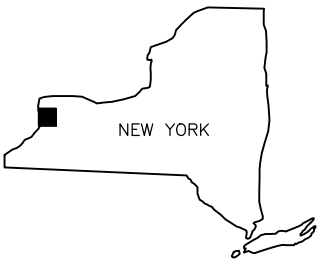
4.2 Recommendations

At this time, no changes to the semi-annual site sampling plan are proposed.

Figures



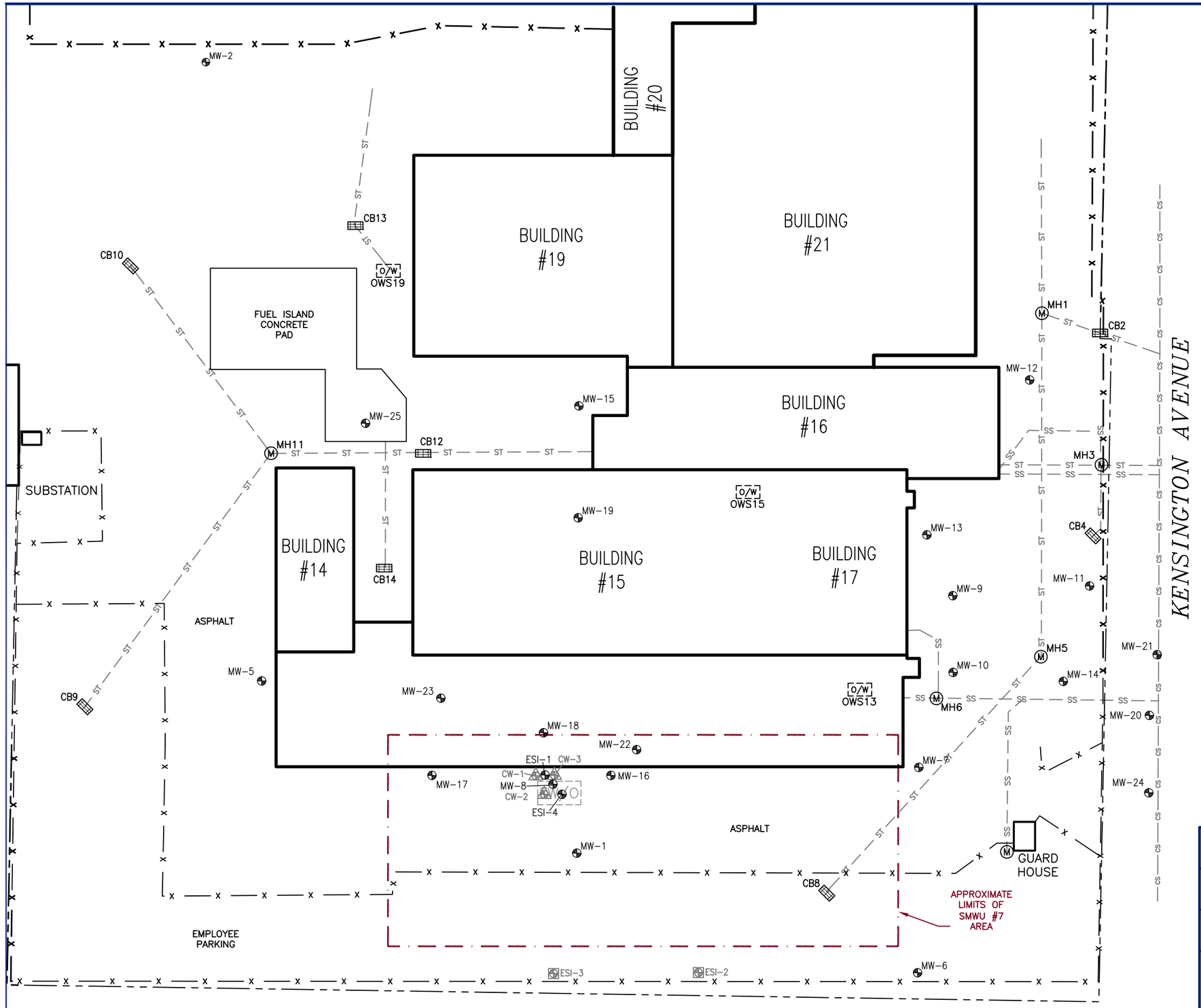
SOURCE: USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE 1965
BUFFALO NE, NEW YORK
CONTOUR INTERVAL = 10'



QUADRANGLE LOCATION

DRAFTED BY: W.A.W.	SITE LOCATION MAP
CHECKED BY:	NATIONAL GRID DEWEY AVENUE SERVICE CENTER 93 DEWEY AVENUE BUFFALO, NEW YORK
REVIEWED BY:	Groundwater & Environmental Services, Inc. 5 TECHNOLOGY PLACE, SUITE 4, EAST SYRACUSE, NY 13057
NORTH	SCALE IN FEET: 0 — 2000 / DATE: 11-2-16 / FIGURE: 1-1

M:\Graphics\0600-Syracuse\Misc\National Grid\Buffalo (Dewey ave)\Buffalo (dewey ave) SLM.dwg, Layout1, 11/2/2016 10:02:16 AM, wwesterlund



LEGEND

- PROPERTY BOUNDARY
- FENCE
- FORMER WASTE OIL TANK
- OIL/WATER SEPARATOR
- CATCH BASIN
- UTILITY MANHOLE
- MONITORING WELL
- MONITORING WELL (DECOMMISSIONED APRIL 2004)
- COLLECTION WELL (DECOMMISSIONED APRIL 2004)
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND STORM SEWER LINE
- COMBINED SANITARY & STORM SEWER LINE

DRAFTED BY: W.G.S.	SITE MAP
CHECKED BY:	NATIONAL GRID DEWEY AVENUE SERVICE CENTER 93 DEWEY AVENUE BUFFALO, NEW YORK
REVIEWED BY:	Groundwater & Environmental Services, Inc. 5 TECHNOLOGY PLACE, SUITE 4, EAST SYRACUSE, NY 13057
NORTH	SCALE IN FEET: 0 APPROXIMATE 60 / DATE: 11-7-16 / FIGURE: 1-2

M:\Graphics\0600-Syracuse\Misc\National Grid\Buffalo (Dewey ave)\Buffalo (dewey ave) SM.dwg, B-60, WShea

LEGEND

- PROPERTY BOUNDARY
- FENCE
- FW/O FORMER WASTE OIL TANK
- O/W OIL/WATER SEPARATOR
- CATCH BASIN
- (M) UTILITY MANHOLE
- MONITORING WELL
- MONITORING WELL (DECOMMISSIONED APRIL 2004)
- COLLECTION WELL (DECOMMISSIONED APRIL 2004)
- (647.66) GROUNDWATER ELEVATION (feet)

BUILDING #20
BUILDING #19
BUILDING #21
BUILDING #16
BUILDING #14
BUILDING #15
BUILDING #17
FUEL ISLAND CONCRETE PAD
SUBSTATION
ASPHALT
EMPLOYEE PARKING
GUARD HOUSE
KENSINGTON AVENUE
GROUNDWATER FLOW DIRECTION
APPROXIMATE LIMITS OF SMWU #7 AREA

MW-2 (637.17)
MW-25
MW-19 (638.09)
MW-15 (638.70)
MW-12 (638.25)
MW-13 (638.12)
MW-9 (638.05)
MW-11 (638.77)
MW-21 (638.00)
MW-14
MW-10
MW-20 (637.98)
MW-24 (638.18)
MW-5 (638.14)
MW-23
MW-18
MW-22
MW-17 (639.31)
MW-16 (636.22)
MW-7 (638.44)
MW-1 (647.54)
MW-6 (640.05)
ESI-1 (647.66)
ESI-2
ESI-3
ESI-4
CW-1
CW-2
CW-3
MW-8

CB2
CB4
CB8
CB9
CB10
CB12
CB13
CB14
MH1
MH3
MH5
MH6
MH11
OWS13
OWS15
OWS19

Groundwater Monitoring Map
October 18-19, 2017

National Grid
Dewey Avenue Service Center
93 Dewey Avenue
Buffalo, New York

Drawn W.G.S.
Designed
Approved
Date 11-29-17
Figure

Scale In Feet
0 60

GES
Groundwater & Environmental Services, Inc.

M:\Graphics\0600-Syracuse\Misc\National Grid\Buffalo (Dewey ave)\Buffalo (dewey ave) SM.dwg, Template B, WShea

Tables

Table 1-1: Groundwater Elevations
National Grid
Dewey Avenue Service Center
Buffalo, New York

Well ID	TOC Elevation (ft AMSL)	Depth to Well Bottom (ft BTOC)	Well Bottom Elev. (ft AMSL)	June 2006 DTW (ft BTOC)	June 2006 Potentiometric Surface Elev. (ft AMSL)	November 2006 DTW (ft BTOC)	November 2006 Potentiometric Surface Elev. (ft AMSL)	April 2007 DTW (ft BTOC)	April 2007 Potentiometric Surface Elev. (ft AMSL)	October 2007 DTW (ft BTOC)	October 2007 Potentiometric Surface Elev. (ft AMSL)
MW-1	650.76	29.90	620.86	3.38	647.38	3.20	647.56	2.80	647.96	3.37	647.39
MW-2	650.55	44.17	606.38	-	-	-	-	-	-	-	-
MW-5	651.65	21.40	630.25	11.40	640.25	12.30	639.35	11.42	640.23	12.95	638.70
MW-6	650.25	21.05	629.20	10.90	639.35	11.50	638.75	7.42	642.83	10.82	639.43
MW-7	650.02	21.30	628.72	11.91	638.11	11.73	638.29	10.78	639.24	11.92	638.10
MW-9	648.95	22.05	626.90	10.98	637.97	10.66	638.29	10.80	638.15	10.62	638.33
MW-10	649.46	24.25	625.21	11.10	638.36	9.45	640.01	9.80	639.66	10.46	639.00
MW-11	647.11	20.22	626.89	8.75	638.36	8.56	638.55	8.07	639.04	8.82	638.29
MW-12	646.90	19.55	627.35	8.60	638.30	8.47	638.43	7.89	639.01	8.58	638.32
MW-13	650.05	26.25	623.80	11.85	638.20	11.50	638.55	10.10	639.95	11.70	638.35
MW-15	651.88	23.80	628.08	12.42	639.46	12.19	639.69	9.62	642.26	12.94	638.94
MW-16	651.72	20.36	631.36	8.58	643.14	7.30	644.42	8.00	643.72	6.95	644.77
MW-17	651.76	20.60	631.16	12.52	639.24	12.96	638.80	13.27	638.49	12.93	638.83
MW-19	651.69	24.00	627.69	12.90	638.79	12.85	638.84	12.20	639.49	13.00	638.69
MW-20	646.76	22.60	624.16	8.86	637.90	8.64	638.12	8.05	638.71	8.92	637.84
MW-21	646.70	21.85	624.85	8.42	638.28	8.40	638.30	7.98	638.72	8.85	637.85
MW-24	647.01	24.25	622.76	9.00	638.01	8.69	638.32	8.08	638.93	8.88	638.13
ESI-1	651.66	21.50	630.16	4.00 (3.98)	647.66 (647.68)	4.00	647.66	3.50	648.16	4.10	647.56

Notes:
TOC = Top of Well Casing
AMSL = Above Mean Sea Level
DTW = Depth to Water
BTOC = Below Top of Casing
Light non-aqueous phase liquid (LNAPL) observed in well ESI-1 only. Numbers in parentheses present depths and elevations to LNAPL.
* = MW-2 is typically inaccessible due to staged equipment.
- = Depth is unknown

Table 1-1: Groundwater Elevations
National Grid
Dewey Avenue Service Center
Buffalo, New York

Well ID	April 2008 DTW (ft BTOC)	April 2008 Potentiometric Surface Elev. (ft AMSL)	October 2008 DTW (ft BTOC)	October 2008 Potentiometric Surface Elev. (ft AMSL)	April 2009 DTW (ft BTOC)	April 2009 Potentiometric Surface Elev. (ft AMSL)	October 2009 DTW (ft BTOC)	October 2009 Potentiometric Surface Elev. (ft AMSL)	April 2010 DTW (ft BTOC)	April 2010 Potentiometric Surface Elev. (ft AMSL)
MW-1	2.95	647.81	3.50	647.26	2.85	647.91	3.00	647.76	2.95	647.81
MW-2	-	-	-	-	-	-	-	-	*	*
MW-5	11.41	640.24	13.47	638.18	12.00	639.65	11.48	640.17	10.60	641.05
MW-6	9.92	640.33	10.40	639.85	7.85	642.40	10.60	639.65	8.90	641.35
MW-7	11.04	638.98	12.10	637.92	10.38	639.64	11.23	638.79	10.88	639.14
MW-9	10.25	638.70	11.02	637.93	9.98	638.97	10.63	638.32	10.45	638.50
MW-10	10.49	638.97	10.82	638.64	10.40	639.06	10.75	638.71	10.46	639.00
MW-11	8.43	638.68	8.68	638.43	8.15	638.96	8.44	638.67	8.52	638.59
MW-12	8.12	638.78	8.00	638.90	7.68	639.22	8.10	638.80	8.02	638.88
MW-13	11.40	638.65	11.83	638.22	11.03	639.02	11.45	638.60	11.40	638.65
MW-15	12.68	639.20	13.25	638.63	11.78	640.10	12.50	639.38	12.40	639.48
MW-16	7.87	643.85	6.79	644.93	6.26	645.46	6.00	645.72	5.20	646.52
MW-17	13.72	638.04	13.05	638.71	12.25	639.51	12.11	639.65	12.20	639.56
MW-19	12.70	638.99	13.05	638.64	11.96	639.73	12.70	638.99	12.55	639.14
MW-20	8.38	638.38	8.88	637.88	7.95	638.81	8.40	638.36	8.25	638.51
MW-21	8.04	638.66	8.68	638.02	7.93	638.77	8.15	638.55	8.20	638.50
MW-24	8.47	638.54	8.95	638.06	8.00	639.01	8.55	638.46	8.32	638.69
ESI-1	3.66	648.00	4.28	647.38	3.55	648.11	3.70	647.96	3.60	648.06

Notes:
TOC = Top of Well Casing
AMSL = Above Mean Sea Level
DTW = Depth to Water
BTOC = Below Top of Casing
Light non-aqueous phase liquid (LNAPL) observed in well ESI-1 only. Numbers in parentheses present depths and elevations to LNAPL.
* = MW-2 is typically inaccessible due to staged equipment.
- = Depth is unknown

Table 1-1: Groundwater Elevations
National Grid
Dewey Avenue Service Center
Buffalo, New York

Well ID	October 2010 DTW (ft BTOC)	October 2010 Potentiometric Surface Elev. (ft AMSL)	April 2011 DTW (ft BTOC)	April 2011 Potentiometric Surface Elev. (ft AMSL)	October 2011 DTW (ft BTOC)	October 2011 Potentiometric Surface Elev. (ft AMSL)	April 2012 DTW (ft BTOC)	April 2012 Potentiometric Surface Elev. (ft AMSL)	October 2012 DTW (ft BTOC)	October 2012 Potentiometric Surface Elev. (ft AMSL)
MW-1	2.95	647.81	2.85	647.91	3.07	647.69	3.41	647.35	3.30	647.46
MW-2	*	*	*	*	15.26	635.29	12.75	637.80	12.20	638.35
MW-5	11.10	640.55	10.68	640.97	11.55	640.10	11.72	639.93	11.25	640.40
MW-6	8.50	641.75	6.90	643.35	10.20	640.05	10.10	640.15	9.90	640.35
MW-7	11.13	638.89	9.46	640.56	11.56	638.46	11.69	638.33	10.88	639.14
MW-9	10.15	638.80	9.70	639.25	10.76	638.19	11.02	637.93	10.58	638.37
MW-10	10.20	639.26	9.48	639.98	10.39	639.07	10.88	638.58	10.76	638.70
MW-11	8.57	638.54	7.80	639.31	8.76	638.35	8.98	638.13	8.14	638.97
MW-12	7.75	639.15	7.60	639.30	8.42	638.48	8.50	638.40	8.24	638.66
MW-13	11.12	638.93	10.66	639.39	11.65	638.40	11.95	638.10	11.50	638.55
MW-15	11.75	640.13	11.58	640.30	12.81	639.07	13.35	638.53	12.47	639.41
MW-16	5.67	646.05	6.45	645.27	5.40	646.32	6.65	645.07	6.50	645.22
MW-17	11.67	640.09	11.57	640.19	11.86	639.90	12.80	638.96	12.37	639.39
MW-19	12.22	639.47	11.08	640.61	12.82	638.87	13.27	638.42	12.63	639.06
MW-20	8.12	638.64	7.55	639.21	8.48	638.28	8.73	638.03	8.82	637.94
MW-21	8.06	638.64	7.65	639.05	8.35	638.35	8.80	637.90	8.34	638.36
MW-24	8.22	638.79	7.60	639.41	8.53	638.48	8.80	638.21	8.40	638.61
ESI-1	3.55	648.11	3.68	647.98	3.94	647.72	4.18	647.48	4.40	647.26

Notes:
TOC = Top of Well Casing
AMSL = Above Mean Sea Level
DTW = Depth to Water
BTOC = Below Top of Casing
Light non-aqueous phase liquid (LNAPL) observed in well ESI-1 only. Numbers in parentheses present depths and elevations to LNAPL.
* = MW-2 is typically inaccessible due to staged equipment.
- = Depth is unknown

Table 1-1: Groundwater Elevations
National Grid
Dewey Avenue Service Center
Buffalo, New York

Well ID	April 2013 DTW (ft BTOC)	April 2013 Potentiometric Surface Elev. (ft AMSL)	October 2013 DTW (ft BTOC)	October 2013 Potentiometric Surface Elev. (ft AMSL)	April 2014 DTW (ft BTOC)	April 2014 Potentiometric Surface Elev. (ft AMSL)	October 2014 DTW (ft BTOC)	October 2014 Potentiometric Surface Elev. (ft AMSL)	April 2015 DTW (ft BTOC)	April 2015 Potentiometric Surface Elev. (ft AMSL)
MW-1	3.02	647.74	3.23	647.53	3.02	647.74	3.82	646.94	2.90	647.86
MW-2	11.62	638.93	11.42	639.13	11.30	639.25	15.40	635.15	14.60	635.95
MW-5	10.89	640.76	11.58	640.07	9.62	642.03	12.53	639.12	9.81	641.84
MW-6	7.58	642.67	8.25	642.00	7.95	642.30	11.15	639.10	8.46	641.79
MW-7	10.31	639.71	11.30	638.72	9.58	640.44	11.98	638.04	10.30	639.72
MW-9	10.07	638.88	10.00	638.95	9.75	639.20	11.16	637.79	10.26	638.69
MW-10	9.57	639.89	10.51	638.95	10.08	639.38	Not Gauged	Not Gauged	10.05	639.41
MW-11	8.12	638.99	8.25	638.86	7.95	639.16	8.80	638.31	8.23	638.88
MW-12	7.91	638.99	8.04	638.86	7.73	639.17	8.90	638.00	8.00	638.90
MW-13	11.05	639.00	11.31	638.74	10.86	639.19	12.17	637.88	11.75	638.30
MW-15	12.21	639.67	12.22	639.66	12.08	639.80	13.62	638.26	12.50	639.38
MW-16	5.75	645.97	4.82	646.90	5.55	646.17	6.06	645.66	5.75	645.97
MW-17	11.75	640.01	12.45	639.31	11.23	640.53	12.19	639.57	10.87	640.89
MW-19	12.26	639.43	12.52	639.17	12.50	639.19	13.56	638.13	12.49	639.20
MW-20	7.80	638.96	8.20	638.56	7.80	638.96	9.00	637.76	8.12	638.64
MW-21	7.80	638.90	8.20	638.50	7.80	638.90	8.72	637.98	8.14	638.56
MW-24	7.90	639.11	8.30	638.71	7.92	639.09	9.13	637.88	8.22	638.79
ESI-1	4.00	647.66	4.20	647.46	3.80	647.86	4.60	647.06	3.66	648.00

Notes:
TOC = Top of Well Casing
AMSL = Above Mean Sea Level
DTW = Depth to Water
BTOC = Below Top of Casing
Light non-aqueous phase liquid (LNAPL) observed in well ESI-1 only. Numbers in parentheses present depths and elevations to LNAPL.
* = MW-2 is typically inaccessible due to staged equipment.
- = Depth is unknown

Table 1-1: Groundwater Elevations
National Grid
Dewey Avenue Service Center
Buffalo, New York

Well ID	October 2015 DTW (ft BTOC)	October 2015 Potentiometric Surface Elev. (ft AMSL)	April 2016 DTW (ft BTOC)	April 2016 Potentiometric Surface Elev. (ft AMSL)	October 2016 DTW (ft BTOC)	October 2016 Potentiometric Surface Elev. (ft AMSL)	April 2017 DTW (ft BTOC)	April 2017 Potentiometric Surface Elev. (ft AMSL)	October 2017 DTW (ft BTOC)	October 2017 Potentiometric Surface Elev. (ft AMSL)
MW-1	2.98	647.78	2.82	647.94	3.52	647.24	2.92	647.84	3.22	647.54
MW-2	13.00	637.55	12.54	638.01	Not Gauged	Not Gauged	13.82	636.73	13.38	637.17
MW-5	12.92	638.73	10.60	641.05	13.75	637.90	10.49	641.16	13.51	638.14
MW-6	10.30	639.95	8.85	641.40	10.21	640.04	8.86	641.39	10.20	640.05
MW-7	11.82	638.20	10.51	639.51	11.60	638.42	Not Gauged	Not Gauged	11.58	638.44
MW-9	10.70	638.25	10.45	638.50	10.84	638.11	10.78	638.17	10.90	638.05
MW-10	10.80	638.66	9.92	639.54	10.36	639.10	10.31	639.15	10.70	638.76
MW-11	8.55	638.56	8.30	638.81	8.71	638.40	8.47	638.64	8.34	638.77
MW-12	8.41	638.49	8.24	638.66	8.64	638.26	8.43	638.47	8.65	638.25
MW-13	11.76	638.29	11.46	638.59	11.82	638.23	11.88	638.17	11.93	638.12
MW-15	13.00	638.88	12.88	639.00	12.95	638.93	13.13	638.75	13.18	638.70
MW-16	5.25	646.47	6.00	645.72	5.52	646.20	6.40	645.32	15.50	636.22
MW-17	13.08	638.68	13.05	638.71	12.50	639.26	12.15	639.61	12.45	639.31
MW-19	13.03	638.66	12.83	638.86	13.00	638.69	13.00	638.69	13.60	638.09
MW-20	8.22	638.54	8.40	638.36	8.65	638.11	8.60	638.16	8.78	637.98
MW-21	8.86	637.84	8.28	638.42	8.61	638.09	8.55	638.15	8.70	638.00
MW-24	8.80	638.21	8.52	638.49	8.80	638.21	8.75	638.26	8.83	638.18
ESI-1	3.80	647.86	3.55	648.11	4.20	647.46	3.78	647.88	4.00	647.66

Notes:
TOC = Top of Well Casing
AMSL = Above Mean Sea Level
DTW = Depth to Water
BTOC = Below Top of Casing
Light non-aqueous phase liquid (LNAPL) observed in well ESI-1 only. Numbers in parentheses present depths and elevations to LNAPL.
* = MW-2 is typically inaccessible due to staged equipment.
- = Depth is unknown

Table 2-1: Groundwater Analytical Results - Total PCBs (units in ppb or ug/L)
National Grid
Dewey Avenue Service Center
Buffalo, New York

		Well ID							
Date	**NYSDEC Value [1]**	**MW-1**	**MW-6**	**MW-9**	**MW-11**	**MW-12**	**MW-20**	**MW-21**	**MW-24**
October 2017	0.09	ND	ND	ND	ND	ND	ND	ND	ND
April 2017	0.09	6.8 J	ND	**16.2**	ND	ND	ND	ND	ND
October 2016	0.09	ND	ND	**37.4**	ND	ND	ND	ND	ND
April 2016	0.09	**3.2**	ND	**11**	ND	ND	ND	ND	ND
October 2015	0.09	**9.10**	ND	**26**	ND	ND	0.053	ND	ND
April 2015	0.09	**0.8**	ND	**6.9**	ND	ND	ND	ND	ND
October 2014	0.09	**0.22**	ND	**43**	ND	ND	ND	ND	ND
April 2014	0.09	**2.8**	ND	**9.4**	ND	ND	ND	ND	ND
October 2013	0.09	**0.15**	ND	**16.0**	**0.10**	ND	ND	ND	ND
April 2013	0.09	**5.7**	ND	**24.0**	ND	ND	ND	ND	ND
October 2012	0.09	**4.5**	**0.16**	**11.0**	ND	ND	ND	ND	0.051
April 2012	0.09	**1.4**	ND	**29.0**	ND	ND	ND	ND	ND
October 2011	0.09	**4.9**	ND	**8.7**	ND	ND	ND	ND	ND
April 2011	0.09	**7.0**	ND	**28.0**	ND	ND	ND	ND	ND
October 2010	0.09	**4.1**	ND	**24.0**	ND	ND	ND	ND	ND
April 2010	0.09	**4.6**	ND	**19.0**	ND	ND	ND	ND	ND
October 2009	0.09	1.4 QSU	ND	15 QSU, D08	ND	ND	ND	ND	ND
April 2009	0.09	**4.8**	**1.1**	ND	ND	ND	ND	ND	ND
October 2008	0.09	**0.44**	ND	**13**	**0.44**	ND	ND	ND	ND
April 2008	0.09	**0.54**	ND	**4.5**	ND	0.01	ND	ND	ND
October 2007	0.09	**1.2**	ND	ND	ND	ND	ND	ND	ND
April 2007	0.09	**1.2**	ND	**9.9**	ND	ND	ND	ND	ND
November 2006	0.09	ND	ND	ND	ND	ND	ND	ND	ND
June 2006	0.09	**1.5**	ND	ND	ND	ND	ND	ND	ND
November 2005	0.09	**1.2**	ND	**17**	ND	ND	ND	ND	ND
April 2005	0.09	**1**	ND	**9.5**	ND	ND	ND	ND	ND
November 2004	0.09	1.7 P	ND	**15**	ND	ND	ND	ND	ND
March 2004	0.09	0.87 P	ND	32.3 P	ND	ND	ND	ND	ND
October 2003	0.09	**1.6**	ND	40.3 PJ	ND	ND	ND	ND	ND
December 2002	0.09	**1.2**	ND	**16**	ND	ND	ND	ND	ND
June 2002	0.09	3.2 J	ND	20 J	ND	ND	ND	ND	ND
October 2001	0.09	3.0 J	ND	29 JN	ND	ND	ND	ND	NS
April 2001	0.09	**3.4**	NS	**6.3**	ND	ND	ND	ND	NS
December 2000	0.09	2.9 JN	NS	21 JN	ND	ND	ND	ND	NS
June 2000	0.09	**2.9**	NS	10 J	ND	ND	NS	NS	NS
December 1999	0.09	3.0 J	NS	21 J	ND	ND	NS	NS	NS
July 1999	0.09	5.9 JN	NS	44 JN	ND	ND	NS	NS	NS
November 1998	0.09	**3.6**	NS	ND	ND	ND	NS	NS	NS
May 1998	0.09	**1.2**	NS	**6.7**	NS	NS	NS	NS	NS

Notes:

(1) NYSDEC Division of Water Technical and Operational Guidance Series (TOGS 1.1.1) "Ambient Water Quality Standards and Guidance Values and Ground Water Effluent Limitations," April 2000, Class GA Ground Water Standards and Guidance Values.

Laboratory Qualifier Notes:

J = Analyte was positively identified; however, the associated numerical value is an estimated concentration only.

JN = The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

P = Greater than 25% difference for detected concentration between two GC columns.

QSU = Sulfur (EPA 3660) clean-up performed on extract.

D08 = Dilution required due to high concentration of target analyte(s).

ND = Not Detected above detection limit.

NS = Not Sampled.

Units in parts per billion (ppb) or micrograms per liter (ug/L).

Bolded numbers indicate Guidance Value Exceedences

Appendix A

Groundwater Monitoring Field Data

SPRING

National Grid
Dewey Avenue Service Center
144 Kensington Avenue
Buffalo, New York

~~Fall~~ Semi-Annual Event
Date: 4/18/17
Technician(s): TD

Well ID.	Sample?	Well Size	DTP	DTW	DTB	Comments
ESI-1	VOC's Fall only	4"		378	21.50	Product-Bearing Well. Sorbent Sock Change Required. ✓
1240 MW-1	yes	4"		292	29.90	
MW-2	no	4"		1382	44.17	
MW-5	no	2"		1049	21.40	
1320 MW-6	yes	2"		886	21.05	Collect MS/DMS Samples.
MW-7	no	2"		—	21.30	
1150 MW-9	yes	2"		1078	22.05	
MW-10	no	2"		1031	24.25	
1110 MW-11	yes	2"		847	20.22	
1030 MW-12	yes	2"		843	19.55	Collect Field Duplicate Sample.
MW-13	no	2"		1188	26.25	
MW-15	no	2"		1313	23.80	
MW-16	VOC's Fall only	2"		640	20.36	Product-Bearing Well.
MW-17	no	2"		1215	20.60	
MW-19	no	2"		1300	24.00	
900 MW-20	yes	2"	~~2600~~	860	22.60	Well in roadway. Lane closure required.
940 MW-21	yes	2"		855	21.85	Well in roadway. Lane closure required.
820 MW-24	yes	2"		875	24.25	Well in roadway. Lane closure required.
MW-25	no	2"		688	15.36	

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel:
Job Number: 06-02882
Well Id. **MW-1**

Date: 4/18/17
Weather: Sunny 48°
Time In: 1210 Time Out: 1245

Well Information

		TOC	Other
Depth to Water:	(feet)	2.92	
Depth to Bottom:	(feet)	29.90	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	26.98	
Volume of Water in Well:	(gal)	17.80	
Three Well Volumes:	(gal)	53.40	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [ ] SS [ ] Other: steel
Well Diameter: 1" [ ] 2" [ ] Other: 4"
Comments:

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]

Average Pumping Rate:	(ml/min)	250
Duration of Pumping:	(min)	30
Total Volume Removed:	(gal)	2.00

Did well go dry? Yes [ ] No [X]

YSI 6920 or Horiba U-52 Water Quality Meter Use Yes [X] No [ ]

Conversion Factors

gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
1210	3.05		14.88	7.75	-90	19.9	42.3	1.67
1215	3.06		14.09	771	-100	20.2	22.1	0
1220	3.06		13.86	770	-112	20.5	17.3	0
1225	3.06		13.06	769	-116	20.7	15.4	0
1230	3.06		12.98	769	-118	20.8	15.2	0
1235	3.06		12.90	769	-121	20.9	15.0	0
1240	3.06		12.81	769	-125	20.9	14.3	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-1-0417** Duplicate? Yes [ ] No [X]
Sample Time: 1240 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes: No Sheen
Slight odor

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel:
Job Number: 06-02882
Well Id. **MW-6**

Date: 4/18/17
Weather: Sunny 50°
Time In: 1250 Time Out: 1335

Well Information

		TOC	Other
Depth to Water:	(feet)	8.86	
Depth to Bottom:	(feet)	21.05	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	12.19	
Volume of Water in Well:	(gal)	1.95	
Three Well Volumes:	(gal)	5.81	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other: ____
Well Diameter: 1" [ ] 2" [X] Other: ____
Comments:

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]

Average Pumping Rate:	(ml/min)	~200
Duration of Pumping:	(min)	30
Total Volume Removed:	(gal)	~1.5

Did well go dry? Yes [ ] No [6]

YSI 6920 or Horiba U-52 Water Quality Meter Use Yes [X] No [ ]

Conversion Factors

gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
1250	9.32		15.94	7.73	-84	17.9	18.5	1.47
1255	9.32		15.17	7.55	-79	18.0	12.2	0
1300	9.32		14.72	7.53	-78	18.2	10.6	0
1305	9.32		14.54	7.53	-77	18.3	9.1	0
1310	9.32		14.37	7.53	-76	18.4	7.9	0
1315	9.32		14.25	7.53	-76	18.4	7.1	0
1320	9.32		14.09	7.53	-75	18.4	6.3	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 6 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

"MW-6-Matrix Spike-0417" **"MW-6-Duplicate Matrix Spike-0417"**

Sample ID: **MW-6-0417** Duplicate? Yes [ ] No [X]
Sample Time: 13:00 MS/DMS? Yes [X] No [ ]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes: No Sheen
Slight Odor

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel:
Job Number: 06-02882
Well Id. **MW-9**

Date: 4/18/17
Weather: Sunny
Time In: 1120 Time Out: 1155

Well Information

		TOC	Other
Depth to Water:	(feet)	10.78	
Depth to Bottom:	(feet)	22.05	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	11.27	
Volume of Water in Well:	(gal)	1.80	
Three Well Volumes:	(gal)	5.40	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other: ____
Well Diameter: 1" [ ] 2" [X] Other: ____
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Average Pumping Rate:	(ml/min)	~200			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	~1.5			

Did well go dry? Yes [ ] No [X]

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors

gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
1120	11.59		13.95	7.49	-76	19.1	10.6	2.22
1125	11.80		14.05	7.37	-97	19.3	4.4	0
1130	11.82		13.96	7.37	-111	19.4	2.9	0
1135	11.82		14.05	7.38	-118	19.6	.5	0
1140	11.82		14.10	7.38	-123	19.5	1.3	0
1145	11.82		14.17	7.39	-125	19.5	1.5	0
1150	11.82		14.21	7.39	-129	19.5	.2	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-9-0417** Duplicate? Yes [ ] No [X]
Sample Time: 1150 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes:
No odor
No Sheen

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel:
Job Number: 06-02882
Well Id. **MW-11**

Date: 4/18/17
Weather: Sunny 48°
Time In: 1040 Time Out: 1115

Well Information

		TOC	Other
Depth to Water:	(feet)	8.47	
Depth to Bottom:	(feet)	20.22	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	11.75	
Volume of Water in Well:	(gal)	1.88	
Three Well Volumes:	(gal)	5.64	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]

Average Pumping Rate:	(ml/min)	~ 200
Duration of Pumping:	(min)	30
Total Volume Removed:	(gal)	~1.5

Did well go dry? Yes [ ] No [✓]

YSI 6920 or Horiba U-52 Water Quality Meter Use Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
1040	9.25		12.03	8.08	49	13.4	16.8	6.56
1045	9.61		11.77	8.03	54	14.1	7.2	3.22
1050	9.74		11.63	8.00	60	14.3	6.3	2.26
1055	9.89		11.52	7.98	67	14.5	5.7	1.93
1100	9.99		11.49	7.99	73	14.6	3.9	1.85
1105	10.27		11.45	7.99	85	14.6	3.3	1.82
1110	10.43		11.41	7.98	87	14.7	3.0	1.74

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-11-0417** Duplicate? Yes [ ] No [X]
Sample Time: 1110 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [✓] UPS [ ]

Comments/Notes: no sheen no odor

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel:
Job Number: 06-02882
Well Id. **MW-12**

Date: 4/18/17
Weather: Sunny 48°
Time In: 1020 Time Out: 1035

Well Information

		TOC	Other
Depth to Water:	(feet)	8.43	
Depth to Bottom:	(feet)	19.55	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	11.12	
Volume of Water in Well:	(gal)	1.78	
Three Well Volumes:	(gal)	5.34	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]			
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]			
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]			
Average Pumping Rate:	(ml/min)	~200 → 200						
Duration of Pumping:	(min)	30						
Total Volume Removed:	(gal)	~2.0						

Did well go dry? Yes [ ] No [Y]

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
1020	9.38		11.50	7.97	0	2.91	19.4	9.39
1025	9.72		11.63	8.13	-7	2.77	14.1	.59
1030	9.91		11.62	8.18	-10	2.71	2.9	.17
1035	9.96		11.69	8.18	-11	2.70	2.0	0
1020	9.99		11.76	8.18	-11	2.69	1.3	0
1025	10.00		11.80	8.18	-12	2.68	.6	0
1030	10.03		11.82	8.18	-12	2.68	.9	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 4 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

"Field Duplicate ~~4016~~" 0417
Sample ID: **MW-12-0417** Duplicate? Yes [X] No [ ]
Sample Time: 1030 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes: NO odor no sheen

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel:
Job Number: 06-02882
Well Id. **MW-20**

Date: 4/18/17
Weather: Sunny 38°
Time In: 830 Time Out: 905

Well Information

		TOC	Other
Depth to Water:	(feet)	8.60	
Depth to Bottom:	(feet)	22.60	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	14.00	
Volume of Water in Well:	(gal)	2.24	
Three Well Volumes:	(gal)	6.72	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other: ____
Well Diameter: 1" [ ] 2" [X] Other: ____
Comments:

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]

Average Pumping Rate:	(ml/min)	~250
Duration of Pumping:	(min)	30
Total Volume Removed:	(gal)	< 2.0

Did well go dry? Yes [ ] No [X]

YSI 6920 or Horiba U-52 Water Quality Meter Use Yes [X] No [ ]

Conversion Factors

gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
830	8.68		7.47	7.66	-148	14.1	17.6	3.13
835	8.68		7.94	7.66	-161	14.2	13.9	.55
840	8.68		8.45	7.59	-177	14.0	11.6	0
845	8.68		8.52	7.59	-186	13.8	11.3	0
850	8.68		8.61	7.59	-193	13.6	9.3	0
855	8.68		8.65	7.59	-199	13.1	1.1	0
900	8.68		8.70	7.59	-204	13.0	1.3	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-20-0417** Duplicate? Yes [ ] No [X]
Sample Time: 900 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes: No sheen rotten egg odor

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel:
Job Number: 06-02882
Well Id. **MW-21**

Date: 4/18/17
Weather: Sunny 45°
Time In: 910 Time Out: 950

Well Information

		TOC	Other
Depth to Water:	(feet)	8.55	
Depth to Bottom:	(feet)	21.85	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	13.30	
Volume of Water in Well:	(gal)	2.13	
Three Well Volumes:	(gal)	6.39	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method: Bailer [ ] Peristaltic [X] Grundfos Pump [ ] other [ ]
Tubing/Bailer Material: Teflon [ ] Stainless St. [ ] Polyethylene [X] other [ ]
Sampling Method: Bailer [ ] Peristaltic [X] Grundfos Pump [ ] other [ ]
Average Pumping Rate: (ml/min) ~250 ↓
Duration of Pumping: (min) 30
Total Volume Removed: (gal) ~2.00 Did well go dry? Yes [ ] No [✓]
YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors	1" ID	2" ID	4" ID	6" ID
gal/ft. of water	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
910	9.62		8.06	7.85	-189	9.95	17.3	3.84
915	10.12		8.23	7.78	-182	10.0	15.2	1.22
920	10.87		8.30	7.76	-158	10.5	11.6	0
925	10.90		8.31	7.76	-147	10.5	8.3	0
930	10.95		8.35	7.75	-140	10.5	6.2	0
935	10.99		8.41	7.75	-133	10.6	5.3	0
940	11.07		8.45	7.76	-130	10.6	3.1	0

Sampling Information:

EPA SW-846 Method 8082	PCB's	Low detection limit of 0.05 ppb	2 - 1 liter amber	Yes [X] No [ ]
EPA SW-846 Method 8260	TCL VOC's	Including Naphthalene	2 - 40 mL vials	Yes [ ] No [X]

Sample ID: **MW-21-0417** Duplicate? Yes [ ] No [X]
Sample Time: 940 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Laboratory: PACE Analytical
Greensburg, PA

Comments/Notes: No sheen
Rotten egg odor

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel:
Job Number: 06-02882
Well Id. **MW-24**

Date: 4/18/17
Weather: Sunny 38°
Time In: 745 Time Out: 825

Well Information

		TOC	Other
Depth to Water:	(feet)	8.75	
Depth to Bottom:	(feet)	24.25	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	15.50	
Volume of Water in Well:	(gal)	2.48	
Three Well Volumes:	(gal)	7.44	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]

Average Pumping Rate:	(ml/min)	~250
Duration of Pumping:	(min)	30
Total Volume Removed:	(gal)	~2.0

Did well go dry? Yes [ ] No [X]

YSI 6920 or Horiba U-52 Water Quality Meter Use Yes [X] No [ ]

Conversion Factors

gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
750	8.80		6.09	6.47	-99	10.7	11.8	.55
755	8.82		7.48	7.16	-112	10.6	12.1	2.26
800	8.80		7.91	7.34	-132	10.5	13.7	1.22
805	8.80		8.09	7.48	-150	10.7	5.18	.58
810	8.80		8.16	7.49	-152	10.7	6.0	.32
815	8.80		8.20	7.50	-159	10.7	5.3	0
820	8.80		8.22	7.50	-162	10.7	5.0	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-24-0417** Duplicate? Yes [ ] No [X]
Sample Time: 820 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes: no sheen
rotten egg odor

National Grid
Dewey Avenue Service Center
144 Kensington Avenue
Buffalo, New York

Fall Semi-Annual Event
October 18-19, 2017

Well ID.	Sample?	Well Size	DTP	DTW	DTB	Comments
ESI-1	VOC's Fall only	4"	trace on boom	4.00	21.50	Checked sorbant sock
MW-1	yes	4"		3.22	29.90	
MW-2	no	4"		13.38	44.17	
MW-5	no	`		13.51	21.40	
MW-6	yes	2"		10.20	21.05	MS/MSD
MW-7	no	2"		11.58	21.30	
MW-9	yes	2"		10.90	22.05	
MW-10	no	2"		10.70	24.25	
MW-11	yes	2"		8.34	20.22	
MW-12	yes	2"		8.65	19.55	Duplicate Sample
MW-13	no	2"		11.93	26.25	
MW-15	no	2"		13.18	23.80	
MW-16	VOC's Fall only	2"	trace on probe	15.50	20.36	
MW-17	no	2"		12.45	20.60	
MW-19	no	2"		13.60	24.00	
MW-20	yes	2"		8.78	22.60	Well in roadway. Lane closure required
MW-21	yes	2"		8.70	21.85	Well in roadway. Lane closure required
MW-24	yes	2"		8.83	24.25	Well in roadway. Lane closure required
MW-25	no	2"		6.88	15.36	

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel: T Beaumont
Job Number: 06-03000
Well Id. **MW-1**

Date: 10/18/17
Weather: Sunny 62
Time In: 950 Time Out: 1035

Well Information

		TOC	Other
Depth to Water:	(feet)	3.22	
Depth to Bottom:	(feet)	29.90	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	26.68	
Volume of Water in Well:	(gal)	17.60	
Three Well Volumes:	(gal)	52.80	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [ ] SS [ ] Other: steel
Well Diameter: 1" [ ] 2" [ ] Other: 4"
Comments:

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]

Average Pumping Rate:	(ml/min)	~250
Duration of Pumping:	(min)	30
Total Volume Removed:	(gal)	~2.5

Did well go dry? Yes [ ] No [X]

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors

gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
1000	3.25		18.87	7.24	-101	17.0	9.2	.51
1005	3.24		19.22	7.24	-116	17.0	5.5	.02
1010	3.24		19.30	7.24	-118	17.1	3.7	0
1015	3.24		19.37	7.24	-118	17.1	1.8	0
1020	3.24		19.40	7.24	-118	17.1	2.2	0
1025	3.24		19.42	7.24	-118	17.0	1.1	0
1030	3.24		19.44	7.24	-119	17.1	.6	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-1-1017** Duplicate? Yes [ ] No [X]
Sample Time: 1030 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes: No Sheen

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel: T Beaumont
Date: 10/18/17
Job Number: 06-03000
Weather: Sunny 62°
Well Id. **MW-6**
Time In: 1045 Time Out: 1130

Well Information

		TOC	Other
Depth to Water:	(feet)	10.20	
Depth to Bottom:	(feet)	21.05	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	10.85	
Volume of Water in Well:	(gal)	1.74	
Three Well Volumes:	(gal)	5.22	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]				
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]				
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]				
Average Pumping Rate:	(ml/min)	~ 175							
Duration of Pumping:	(min)	30							
Total Volume Removed:	(gal)	~ 2.0							

Did well go dry? Yes [ ] No [X]

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors

gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
1045	10.90		18.75	7.22	-64	14.5	8.7	.37
1050	10.92		18.71	7.21	-67	14.6	3.6	.12
1055	10.92		18.70	7.21	-71	14.6	1.4	0
1100	10.90		18.68	7.21	-72	14.6	.3	0
1105	10.90		18.66	7.21	-72	14.5	0	0
1110	10.90		18.62	7.22	-72	14.5	0	0
1115	10.90		18.60	7.22	-72	14.5	0	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 6 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

MW-6-MS-1017 and MW-6-MSD-1017

Sample ID: **MW-6-1017** Duplicate? Yes [ ] No [X]
Sample Time: 1115 MS/DMS? Yes [X] No [ ]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes: no Sheen

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel: T Beaumont
Job Number: 06-03000
Well Id. **MW-9**

Date: 10/18/17
Weather: Sunny 62°
Time In: 820 Time Out: 900

Well Information

		TOC	Other
Depth to Water:	(feet)	10.90	
Depth to Bottom:	(feet)	22.05	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	11.15	
Volume of Water in Well:	(gal)	1.78	
Three Well Volumes:	(gal)	5.34	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]				
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]				
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]				
Average Pumping Rate:	(ml/min)	175							
Duration of Pumping:	(min)	30							
Total Volume Removed:	(gal)	~ 1.5							

Did well go dry? Yes [ ] No [X]

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
820	11.75		18.00	7.41	-145	6.21	1.6	.86
825	12.00		18.00	7.39	-195	6.25	2.0	.41
830	11.76		17.86	7.44	-195	6.33	1.3	.27
835	11.82		17.98	7.34	-207	6.41	.08	.15
840	11.82		18.00	7.42	-212	6.41	.03	.03
845	11.84		18.01	7.46	-224	6.44	.02	0
850	11.64		18.02	7.45	-230	6.45	0	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-9-1017** Duplicate? Yes [ ] No [X]
Sample Time: 850 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes:
no sheen

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel: T Beaumont
Job Number: 06-03000
Well Id. **MW-11**

Date: 10/18/17
Weather: Sunny 62
Time In: 905 Time Out: 940

Well Information

		TOC	Other
Depth to Water:	(feet)	8.34	
Depth to Bottom:	(feet)	20.22	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	11.88	
Volume of Water in Well:	(gal)	1.90	
Three Well Volumes:	(gal)	5.70	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]			
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]			
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]			
Average Pumping Rate:	(ml/min)	~175						
Duration of Pumping:	(min)	30						
Total Volume Removed:	(gal)	~1.5	Did well go dry?	Yes [ ]	No [X]			

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
905	10.50		17.71	7.94	-121	3.42	22.9	.50
910	10.70		17.93	787	-102	3.39	4.4	.02
915	10.65		17.57	788	-89	337	1.7	.01
920	10.58		17.68	787	-85	336	1.0	0
925	10.58		18.03	786	-83	335	.06	0
930	10.60		18.03	786	-76	335	.04	0
935	10.64		18.03	788	-75	335	0	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-11-1017** Duplicate? Yes [ ] No [X]
Sample Time: 935 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes: no sheen

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel: T Beaumont
Job Number: 06-03000
Well Id. **MW-12**

Date: 10/18/17
Weather: Sunny 58°
Time In: 730 Time Out: 820

Well Information

		TOC	Other
Depth to Water:	(feet)	8.65	
Depth to Bottom:	(feet)	19.55	
Depth to Product:	(feet)	-	
Length of Water Column:	(feet)	10.90	
Volume of Water in Well:	(gal)	1.74	
Three Well Volumes:	(gal)	5.22	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]			
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]			
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]			
Average Pumping Rate:	(ml/min)	~ 175						
Duration of Pumping:	(min)	30						
Total Volume Removed:	(gal)	~ 1.5	Did well go dry?	Yes [ ]	No [X]			

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
740	9.40		17.37	6.51	185	2.74	16.2	2.24
745	9.68		17.61	7.26	164	2.71	8.1	1.41
750	9.70		17.65	7.44	153	2.70	5.0	1.88
755	9.70		17.52	7.51	147	2.70	4.2	2.00
800	9.70		17.51	7.52	143	2.70	2.8	2.22
805	9.70		17.52	7.52	142	2.70	2.1	2.41
810	9.70		17.57	7.52	140	2.70	1.6	2.60

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 4 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Field Dup-1017
Sample ID: **MW-12-1017** Duplicate? Yes [X] No [ ]
Sample Time: 810 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes: No Sheen

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel: T Beaumont
Date: 10/18/17
Job Number: 06-03000
Weather: Sunny 62
Well Id. **MW-20**
Time In: 900 Time Out: 935

Well Information

		TOC	Other
Depth to Water:	(feet)	8.78	
Depth to Bottom:	(feet)	22.60	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	13.82	
Volume of Water in Well:	(gal)	2.21	
Three Well Volumes:	(gal)	663	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Average Pumping Rate:	(ml/min)	471			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	~1.5			

Did well go dry? Yes [ ] No [X]
YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
900	887		16.61	7.47	-157	9.88	30.5	1.38
905	888		16.46	7.31	-177	9.80	23.6	.13
910	886		16.41	7.30	-183	9.71	13.2	.03
915	~~895~~		16.40	7.30	-187	9.60	11.3	0
920	888		16.38	7.29	-191	9.57	10.0	0
925	884		16.39	7.25	-193	9.58	9.9	0
930	888		16.39	7.24	-194	9.58	9.2	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-20-1017** Duplicate? Yes [ ] No [X]
Sample Time: 930 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes: no sheen no hc egg odor

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel: T Beaumont
Date: 10/19/17
Job Number: 06-03000
Weather: Sunny 62
Well Id. **MW-21**
Time In: 940 Time Out: 1020

Well Information

		TOC	Other
Depth to Water:	(feet)	8.70	
Depth to Bottom:	(feet)	21.85	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	13.15	
Volume of Water in Well:	(gal)	210	
Three Well Volumes:	(gal)	630	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]
Average Pumping Rate:	(ml/min)	~175 ↓			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	~1.5	Did well go dry?	Yes [ ]	No [X]

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
940	10.03		17.12	7.51	-84	3.03	31.6	15
945	10.31		17.35	7.48	-74	2.99	24.1	0
950	10.52		17.43	7.47	-72	2.97	21.6	0
955	10.55		17.48	7.48	-68	2.95	20.5	0
1000	10.59		17.65	7.48	-64	2.94	19.4	0
1005	10.62		17.59	7.48	-63	2.94	18.9	0
1010	10.70		17.66	7.47	-60	2.95	17.6	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No

Sample ID: **MW-21-1017** Duplicate? Yes [ ] No [X]
Sample Time: 1010 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes: No Sheen no H2S egg odor

Laboratory: PACE Analytical Greensburg, PA

National Grid
Dewey Avenue Service Center, 144 Kensington Ave, Buffalo, New York

Sampling Personnel: T Beaumont
Date: 10/19/17
Job Number: 06-03000
Weather: Sunny 60°
Well Id. **MW-24**
Time In: 815 Time Out: 855

Well Information

		TOC	Other
Depth to Water:	(feet)	883	
Depth to Bottom:	(feet)	24.25	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	15.42	
Volume of Water in Well:	(gal)	2.47	
Three Well Volumes:	(gal)	7.41	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other:
Well Diameter: 1" [ ] 2" [X] Other:
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]			
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]			
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	other [ ]			
Average Pumping Rate:	(ml/min)	~ 175						
Duration of Pumping:	(min)	30						
Total Volume Removed:	(gal)	~ 1.5	Did well go dry?	Yes [ ]	No [X]			

YSI 6920 or Horiba U-52 Water Quality Meter Us Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Amount purged (gal)	Temp °C	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)
815	8.95		14.46	6.57	-66	10.2	21.2	1.65
820	8.96		15.80	7.00	-159	10.1	15.9	.74
825	8.96		15.93	7.19	-175	10.0	12.9	.43
830	8.96		16.02	7.23	-184	10.0	4.6	.21
835	8.96		16.08	7.24	-188	10.0	.9	.08
840	8.96		16.12	7.24	-189	10.0	.1	.02
845	8.96		16.15	7.24	-192	10.0	0	0

Sampling Information:

EPA SW-846 Method 8082 PCB's Low detection limit of 0.05 ppb 2 - 1 liter amber Yes [X] No [ ]
EPA SW-846 Method 8260 TCL VOC's Including Naphthalene 2 - 40 mL vials Yes [ ] No [X]

Sample ID: **MW-24-1017** Duplicate? Yes [ ] No [X]
Sample Time: 845 MS/DMS? Yes [ ] No [X]

Shipped: Drop-off [ ] Pace Courier [ ] Fed-Ex [X] UPS [ ]

Comments/Notes: no sheen rotten egg odor

Laboratory: PACE Analytical Greensburg, PA

Appendix B

Groundwater Monitoring Laboratory Data

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

May 02, 2017

Mr. Mark Boorady
Groundwater & Environmental Services, Inc.
5 Technology Place, Suite 4
East Syracuse, NY 13057

RE: Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Dear Mr. Boorady:
Enclosed are the analytical results for sample(s) received by the laboratory on April 19, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rachel D Christner

Rachel Christner
rachel.christner@pacelabs.com
724-850-5611
Project Manager

Enclosures

cc: GES Reports - Syracuse, Groundwater & Environmental Services, Inc.
Ms. Cheryl Golden-Walts, Groundwater & Environmental Services, Inc.
Chandler Swartzendruber, Groundwater & Environmental Services, Inc.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30216514001	**MW-1-0417**	Water	04/18/17 12:40	04/19/17 09:45
30216514002	**MW-6-0417**	Water	04/18/17 13:20	04/19/17 09:45
30216514003	**MW-9-0417**	Water	04/18/17 11:50	04/19/17 09:45
30216514004	**MW-11-0417**	Water	04/18/17 11:10	04/19/17 09:45
30216514005	**MW-12-0417**	Water	04/18/17 10:30	04/19/17 09:45
30216514006	**MW-20-0417**	Water	04/18/17 09:00	04/19/17 09:45
30216514007	**MW-21-0417**	Water	04/18/17 09:40	04/19/17 09:45
30216514008	**MW-24-0417**	Water	04/18/17 08:20	04/19/17 09:45
30216514009	**Field Duplicate-0417**	Water	04/18/17 00:01	04/19/17 09:45
30216514010	**MW-6-Matrix Spike-0417**	Water	04/18/17 13:20	04/19/17 09:45
30216514011	**MW-6-Duplicate Matrix Spike-04**	Water	04/18/17 13:20	04/19/17 09:45

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SAMPLE ANALYTE COUNT

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30216514001	**MW-1-0417**	EPA 608	SJG	9	PASI-PA
30216514002	**MW-6-0417**	EPA 608	SJG	9	PASI-PA
30216514003	**MW-9-0417**	EPA 608	SJG	9	PASI-PA
30216514004	**MW-11-0417**	EPA 608	SJG	9	PASI-PA
30216514005	**MW-12-0417**	EPA 608	SJG	9	PASI-PA
30216514006	**MW-20-0417**	EPA 608	SJG	9	PASI-PA
30216514007	**MW-21-0417**	EPA 608	SJG	9	PASI-PA
30216514008	**MW-24-0417**	EPA 608	SJG	9	PASI-PA
30216514009	**Field Duplicate-0417**	EPA 608	SJG	9	PASI-PA
30216514010	**MW-6-Matrix Spike-0417**	EPA 608	SJG	9	PASI-PA
30216514011	**MW-6-Duplicate Matrix Spike-04**	EPA 608	SJG	9	PASI-PA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Method: **EPA 608**
Description: 608 GCS PCBs
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 02, 2017

General Information:
11 samples were analyzed for EPA 608. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 608 SF with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 256168

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Analyte Comments:

QC Batch: 256168

1c: A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

- MW-1-0417 (Lab ID: 30216514001)
  - PCB-1016 (Aroclor 1016)
  - PCB-1221 (Aroclor 1221)
  - PCB-1232 (Aroclor 1232)
  - PCB-1242 (Aroclor 1242)
  - PCB-1248 (Aroclor 1248)
  - PCB-1254 (Aroclor 1254)
  - PCB-1260 (Aroclor 1260)

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PROJECT NARRATIVE

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Method: **EPA 608**
Description: 608 GCS PCBs
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 02, 2017

Analyte Comments:

QC Batch: 256225

2c: The result is reported from the front column due to low response for this analyte in the CCVs on the rear column. The lower of the two results is reported.

- MW-9-0417 (Lab ID: 30216514003)
  - PCB-1221 (Aroclor 1221)

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Sample: MW-1-0417 **Lab ID: 30216514001** Collected: 04/18/17 12:40 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.97 U**	ug/L	0.97	0.019	1	04/24/17 13:04	04/28/17 18:32	12674-11-2	1c,CH, IH
PCB-1221 (Aroclor 1221)	**6.8J**	ug/L	9.7	0.60	10	04/24/17 13:04	05/01/17 18:45	11104-28-2	1c
PCB-1232 (Aroclor 1232)	**0.97 U**	ug/L	0.97	0.0096	1	04/24/17 13:04	04/28/17 18:32	11141-16-5	1c,CH
PCB-1242 (Aroclor 1242)	**0.97 U**	ug/L	0.97	0.028	1	04/24/17 13:04	04/28/17 18:32	53469-21-9	1c,CH
PCB-1248 (Aroclor 1248)	**0.97 U**	ug/L	0.97	0.023	1	04/24/17 13:04	04/28/17 18:32	12672-29-6	1c,CH
PCB-1254 (Aroclor 1254)	**0.97 U**	ug/L	0.97	0.024	1	04/24/17 13:04	04/28/17 18:32	11097-69-1	1c,CH
PCB-1260 (Aroclor 1260)	**0.97 U**	ug/L	0.97	0.0095	1	04/24/17 13:04	04/28/17 18:32	11096-82-5	1c
Surrogates									
Tetrachloro-m-xylene (S)	105	%	32-101		1	04/24/17 13:04	04/28/17 18:32	877-09-8	CH,ST
Decachlorobiphenyl (S)	60	%	10-109		1	04/24/17 13:04	04/28/17 18:32	2051-24-3	CH

Sample: MW-6-0417 **Lab ID: 30216514002** Collected: 04/18/17 13:20 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.019	1	04/25/17 08:32	04/28/17 19:33	12674-11-2	CH,IH, M1
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.061	1	04/25/17 08:32	04/28/17 19:33	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.0097	1	04/25/17 08:32	04/28/17 19:33	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.028	1	04/25/17 08:32	04/28/17 19:33	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.023	1	04/25/17 08:32	04/28/17 19:33	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.025	1	04/25/17 08:32	04/28/17 19:33	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.0096	1	04/25/17 08:32	04/28/17 19:33	11096-82-5	M1
Surrogates									
Tetrachloro-m-xylene (S)	73	%	32-101		1	04/25/17 08:32	04/28/17 19:33	877-09-8	CH
Decachlorobiphenyl (S)	68	%	10-109		1	04/25/17 08:32	04/28/17 19:33	2051-24-3	CH

Sample: MW-9-0417 **Lab ID: 30216514003** Collected: 04/18/17 11:50 Received: 04/19/17 09:45 Matrix: Water

Comments: • Received 1L glass amber broken.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.019	1	04/25/17 08:32	04/28/17 19:54	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**16.2**	ug/L	9.8	0.61	10	04/25/17 08:32	05/01/17 19:47	11104-28-2	2c
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.0097	1	04/25/17 08:32	04/28/17 19:54	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.028	1	04/25/17 08:32	04/28/17 19:54	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.023	1	04/25/17 08:32	04/28/17 19:54	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.025	1	04/25/17 08:32	04/28/17 19:54	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.0096	1	04/25/17 08:32	04/28/17 19:54	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	105	%	32-101		1	04/25/17 08:32	04/28/17 19:54	877-09-8	CH,ST

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Sample: MW-9-0417 **Lab ID: 30216514003** Collected: 04/18/17 11:50 Received: 04/19/17 09:45 Matrix: Water
Comments: • Received 1L glass amber broken.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
Surrogates									
Decachlorobiphenyl (S)	70	%	10-109		1	04/25/17 08:32	04/28/17 19:54	2051-24-3	CH

Sample: MW-11-0417 **Lab ID: 30216514004** Collected: 04/18/17 11:10 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.97 U**	ug/L	0.97	0.019	1	04/25/17 08:32	04/28/17 22:18	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**0.97 U**	ug/L	0.97	0.060	1	04/25/17 08:32	04/28/17 22:18	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.97 U**	ug/L	0.97	0.0096	1	04/25/17 08:32	04/28/17 22:18	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.97 U**	ug/L	0.97	0.028	1	04/25/17 08:32	04/28/17 22:18	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.97 U**	ug/L	0.97	0.023	1	04/25/17 08:32	04/28/17 22:18	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.97 U**	ug/L	0.97	0.024	1	04/25/17 08:32	04/28/17 22:18	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.97 U**	ug/L	0.97	0.0095	1	04/25/17 08:32	04/28/17 22:18	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	69	%	32-101		1	04/25/17 08:32	04/28/17 22:18	877-09-8	CH
Decachlorobiphenyl (S)	79	%	10-109		1	04/25/17 08:32	04/28/17 22:18	2051-24-3	

Sample: MW-12-0417 **Lab ID: 30216514005** Collected: 04/18/17 10:30 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.019	1	04/25/17 08:32	04/28/17 22:38	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.061	1	04/25/17 08:32	04/28/17 22:38	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.0097	1	04/25/17 08:32	04/28/17 22:38	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.028	1	04/25/17 08:32	04/28/17 22:38	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.023	1	04/25/17 08:32	04/28/17 22:38	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.025	1	04/25/17 08:32	04/28/17 22:38	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.0096	1	04/25/17 08:32	04/28/17 22:38	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	73	%	32-101		1	04/25/17 08:32	04/28/17 22:38	877-09-8	CH
Decachlorobiphenyl (S)	86	%	10-109		1	04/25/17 08:32	04/28/17 22:38	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Sample: MW-20-0417 **Lab ID: 30216514006** Collected: 04/18/17 09:00 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.019	1	04/25/17 08:32	04/28/17 22:59	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.061	1	04/25/17 08:32	04/28/17 22:59	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.0097	1	04/25/17 08:32	04/28/17 22:59	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.028	1	04/25/17 08:32	04/28/17 22:59	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.023	1	04/25/17 08:32	04/28/17 22:59	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.025	1	04/25/17 08:32	04/28/17 22:59	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.0096	1	04/25/17 08:32	04/28/17 22:59	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	69	%	32-101		1	04/25/17 08:32	04/28/17 22:59	877-09-8	CH
Decachlorobiphenyl (S)	85	%	10-109		1	04/25/17 08:32	04/28/17 22:59	2051-24-3	

Sample: MW-21-0417 **Lab ID: 30216514007** Collected: 04/18/17 09:40 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.97 U**	ug/L	0.97	0.019	1	04/25/17 08:32	04/28/17 23:19	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**0.97 U**	ug/L	0.97	0.061	1	04/25/17 08:32	04/28/17 23:19	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.97 U**	ug/L	0.97	0.0096	1	04/25/17 08:32	04/28/17 23:19	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.97 U**	ug/L	0.97	0.028	1	04/25/17 08:32	04/28/17 23:19	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.97 U**	ug/L	0.97	0.023	1	04/25/17 08:32	04/28/17 23:19	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.97 U**	ug/L	0.97	0.024	1	04/25/17 08:32	04/28/17 23:19	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.97 U**	ug/L	0.97	0.0095	1	04/25/17 08:32	04/28/17 23:19	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	64	%	32-101		1	04/25/17 08:32	04/28/17 23:19	877-09-8	CH
Decachlorobiphenyl (S)	73	%	10-109		1	04/25/17 08:32	04/28/17 23:19	2051-24-3	

Sample: MW-24-0417 **Lab ID: 30216514008** Collected: 04/18/17 08:20 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.019	1	04/25/17 08:32	04/28/17 23:40	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.061	1	04/25/17 08:32	04/28/17 23:40	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.0097	1	04/25/17 08:32	04/28/17 23:40	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.028	1	04/25/17 08:32	04/28/17 23:40	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.023	1	04/25/17 08:32	04/28/17 23:40	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.025	1	04/25/17 08:32	04/28/17 23:40	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.0096	1	04/25/17 08:32	04/28/17 23:40	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	77	%	32-101		1	04/25/17 08:32	04/28/17 23:40	877-09-8	CH
Decachlorobiphenyl (S)	81	%	10-109		1	04/25/17 08:32	04/28/17 23:40	2051-24-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Sample: Field Duplicate-0417 **Lab ID: 30216514009** Collected: 04/18/17 00:01 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.019	1	04/25/17 08:32	04/29/17 00:00	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.061	1	04/25/17 08:32	04/29/17 00:00	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.0097	1	04/25/17 08:32	04/29/17 00:00	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.028	1	04/25/17 08:32	04/29/17 00:00	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.023	1	04/25/17 08:32	04/29/17 00:00	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.025	1	04/25/17 08:32	04/29/17 00:00	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.0096	1	04/25/17 08:32	04/29/17 00:00	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	69	%	32-101		1	04/25/17 08:32	04/29/17 00:00	877-09-8	CH
Decachlorobiphenyl (S)	82	%	10-109		1	04/25/17 08:32	04/29/17 00:00	2051-24-3	

Sample: MW-6-Matrix Spike-0417 **Lab ID: 30216514010** Collected: 04/18/17 13:20 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**1.0**	ug/L	0.99	0.019	1	04/25/17 08:32	04/29/17 00:21	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**0.99 U**	ug/L	0.99	0.061	1	04/25/17 08:32	04/29/17 00:21	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.99 U**	ug/L	0.99	0.0098	1	04/25/17 08:32	04/29/17 00:21	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.99 U**	ug/L	0.99	0.029	1	04/25/17 08:32	04/29/17 00:21	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.99 U**	ug/L	0.99	0.023	1	04/25/17 08:32	04/29/17 00:21	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.99 U**	ug/L	0.99	0.025	1	04/25/17 08:32	04/29/17 00:21	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.92J**	ug/L	0.99	0.0097	1	04/25/17 08:32	04/29/17 00:21	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	81	%	32-101		1	04/25/17 08:32	04/29/17 00:21	877-09-8	CH
Decachlorobiphenyl (S)	68	%	10-109		1	04/25/17 08:32	04/29/17 00:21	2051-24-3	

Sample: MW-6-Duplicate Matrix Spike-04 **Lab ID: 30216514011** Collected: 04/18/17 13:20 Received: 04/19/17 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**1.0**	ug/L	0.98	0.019	1	04/25/17 08:32	04/29/17 00:42	12674-11-2	CH,IH
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.061	1	04/25/17 08:32	04/29/17 00:42	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.0097	1	04/25/17 08:32	04/29/17 00:42	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.028	1	04/25/17 08:32	04/29/17 00:42	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.023	1	04/25/17 08:32	04/29/17 00:42	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.025	1	04/25/17 08:32	04/29/17 00:42	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.91J**	ug/L	0.98	0.0096	1	04/25/17 08:32	04/29/17 00:42	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	32-101		1	04/25/17 08:32	04/29/17 00:42	877-09-8	CH
Decachlorobiphenyl (S)	69	%	10-109		1	04/25/17 08:32	04/29/17 00:42	2051-24-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

QC Batch: 256168 Analysis Method: EPA 608
QC Batch Method: EPA 608 SF Analysis Description: 608 GCS PCB
Associated Lab Samples: 30216514001

METHOD BLANK: 1262137 Matrix: Water
Associated Lab Samples: 30216514001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	1.0 U	1.0	0.020	04/28/17 13:44	CH,IH
PCB-1221 (Aroclor 1221)	ug/L	1.0 U	1.0	0.062	04/28/17 13:44	CH
PCB-1232 (Aroclor 1232)	ug/L	1.0 U	1.0	0.0099	04/28/17 13:44	CH
PCB-1242 (Aroclor 1242)	ug/L	1.0 U	1.0	0.029	04/28/17 13:44	CH
PCB-1248 (Aroclor 1248)	ug/L	1.0 U	1.0	0.024	04/28/17 13:44	CH
PCB-1254 (Aroclor 1254)	ug/L	1.0 U	1.0	0.025	04/28/17 13:44	CH
PCB-1260 (Aroclor 1260)	ug/L	1.0 U	1.0	0.0098	04/28/17 13:44	
Decachlorobiphenyl (S)	%	51	10-109		04/28/17 13:44	CH
Tetrachloro-m-xylene (S)	%	87	32-101		04/28/17 13:44	CH

LABORATORY CONTROL SAMPLE: 1262138

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	1.2	1.1	90	53-113	CH,IH
PCB-1260 (Aroclor 1260)	ug/L	1.2	0.95J	76	40-112	
Decachlorobiphenyl (S)	%			60	10-109	CH
Tetrachloro-m-xylene (S)	%			88	32-101	CH

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

QC Batch: 256225 Analysis Method: EPA 608
QC Batch Method: EPA 608 SF Analysis Description: 608 GCS PCB
Associated Lab Samples: 30216514002, 30216514003, 30216514004, 30216514005, 30216514006, 30216514007, 30216514008, 30216514009, 30216514010, 30216514011

METHOD BLANK: 1262339 Matrix: Water
Associated Lab Samples: 30216514002, 30216514003, 30216514004, 30216514005, 30216514006, 30216514007, 30216514008, 30216514009, 30216514010, 30216514011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	1.0 U	1.0	0.020	04/28/17 18:52	CH,IH
PCB-1221 (Aroclor 1221)	ug/L	1.0 U	1.0	0.062	04/28/17 18:52	CH
PCB-1232 (Aroclor 1232)	ug/L	1.0 U	1.0	0.0099	04/28/17 18:52	CH
PCB-1242 (Aroclor 1242)	ug/L	1.0 U	1.0	0.029	04/28/17 18:52	CH
PCB-1248 (Aroclor 1248)	ug/L	1.0 U	1.0	0.024	04/28/17 18:52	CH
PCB-1254 (Aroclor 1254)	ug/L	1.0 U	1.0	0.025	04/28/17 18:52	CH
PCB-1260 (Aroclor 1260)	ug/L	1.0 U	1.0	0.0098	04/28/17 18:52	
Decachlorobiphenyl (S)	%	49	10-109		04/28/17 18:52	CH
Tetrachloro-m-xylene (S)	%	88	32-101		04/28/17 18:52	CH

LABORATORY CONTROL SAMPLE: 1262340

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	1.2	1.1	85	53-113	CH,IH
PCB-1260 (Aroclor 1260)	ug/L	1.2	0.93J	75	40-112	
Decachlorobiphenyl (S)	%			66	10-109	CH
Tetrachloro-m-xylene (S)	%			85	32-101	CH

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1262341 1262342

Parameter	Units	30216514002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	0.98 U	1.2	1.2	1.0	1.0	84	84	53-113	2	25	CH,IH
PCB-1260 (Aroclor 1260)	ug/L	0.98 U	1.2	1.2	0.92J	0.91J	75	75	40-112		25	
Decachlorobiphenyl (S)	%						68	69	10-109			
Tetrachloro-m-xylene (S)	%						81	78	32-101			CH

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: 256168

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
2c	The result is reported from the front column due to low response for this analyte in the CCVs on the rear column. The lower of the two results is reported.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
IH	This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
ST	Surrogate recovery was above laboratory control limits. Results may be biased high.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: National Grid - Buffalo Dewey
Pace Project No.: 30216514

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30216514001	**MW-1-0417**	EPA 608 SF	256168	EPA 608	256363
30216514002	**MW-6-0417**	EPA 608 SF	256225	EPA 608	256366
30216514003	**MW-9-0417**	EPA 608 SF	256225	EPA 608	256366
30216514004	**MW-11-0417**	EPA 608 SF	256225	EPA 608	256366
30216514005	**MW-12-0417**	EPA 608 SF	256225	EPA 608	256366
30216514006	**MW-20-0417**	EPA 608 SF	256225	EPA 608	256366
30216514007	**MW-21-0417**	EPA 608 SF	256225	EPA 608	256366
30216514008	**MW-24-0417**	EPA 608 SF	256225	EPA 608	256366
30216514009	**Field Duplicate-0417**	EPA 608 SF	256225	EPA 608	256366
30216514010	**MW-6-Matrix Spike-0417**	EPA 608 SF	256225	EPA 608	256366
30216514011	**MW-6-Duplicate Matrix Spike-04**	EPA 608 SF	256225	EPA 608	256366

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

30216514

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: GES - Syracuse	Report To: M Boorady (GES) mboorady@gesonline.com	Attention: Accounts Payable via email at NERegion@gesonline.com
Address: 5 Technology Place, Suite 4	Copy To:	Company Name: Groundwater & Environmental Services, Inc.
East Syracuse, New York 13057		Address: 5 Technology Place, Suite 4, East Syracuse, NY 13057
Email To: mboorady@gesonline.com	Purchase Order No.:	Pace Quote Reference:
Phone : 800.220.3069, x4065 Fax: None	Project Name: National Grid - Buffalo Dewey Avenue Site, Buffalo, NY	Pace Project Manager: Rachel Christner
Requested Due Date/TAT: Standard	Project Number: 06-02882-142140-160	Pace Profile #:

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

SITE LOCATION: GA IL IN MI NC OH SC WI OTHER

Filtered (Y/N)

WO#:30216514

Section D Required Client Information

SAMPLE ID

One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL WP
WIPE	AR
AIR	OT
OTHER	TS
TISSUE	

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED GRAB DATE	COLLECTED GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	PCBs (8082 LL)	Pace Project Number / Lab I.D.
1	MW-1-0417	WT	G			4/18/17	1240		2	2								2	001
2	MW-6-0417	WT	G			4/18/17	1380		2	2								2	002
3	MW-9-0417	WT	G			4/18/17	1150		2	2								2	003
4	MW-11-0417	WT	G			4/18/17	1110		2	2								2	004
5	MW-12-0417	WT	G			4/18/17	1030		2	2								2	005
6	MW-20-0417	WT	G			4/18/17	900		2	2								2	006
7	MW-21-0417	WT	G			4/18/17	940		2	2								2	007
8	MW-24-0417	WT	G			4/18/17	820		2	2								2	008
9	Field Duplicate-0417	WT	G			4/18/17	—		2	2								2	009
10	MW-6-Matrix Spike-0417	WT	G			4/18/17	1320		2	2								2	010
11	MW-6-Duplicate Matrix Spike-0417	WT	G			4/18/17	1320		2	2								2	011
12	---END OF RECORD---																		

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	4/18/17	1400		4/19/17	0945	0602 (Y) (Y/N) (Y/N)
						Y/N Y/N Y/N
						Y/N Y/N Y/N
						Y/N Y/N Y/N

Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact

Additional Comments:

SAMPLES WILL ARRIVE IN # 2 COOLERS.

ltuovila@gesonline.com

Please send reports to: mboorady@gesonline.com, cgoldenwalts@gesonline.com, Syracuselabs@gesonline.com, ges@equisonline.com

SPECIFIC EDD NAME:

NGBuffaloDeweyAve-labnumber.28351.EQEDD.zip

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Timothy Beaver

SIGNATURE of SAMPLER: DATE Signed (MM / DD / YY): 4/18/17

ANL

Sample Condition Upon Receipt Pittsburgh

30216514 - 7

Pace Analytical

Client Name: GES Syracuse Project # _____

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 7862 8019 8775

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Thermometer Used 6 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 0.6 °C Correction Factor: 0 °C Final Temp: 0.6 °C cooler #1
0.7 cooler #2

Temp should be above freezing to 6°C

Date and Initials of person examining contents: BJM 4/19/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	X			5.
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used: -Pace Containers Used:	X X			10.
Containers Intact:		X		11. 1L Amber Jar broke from sample 003
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:	X			13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation. All containers needing preservation are found to be in compliance with EPA recommendation.	X X			15.
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed BJM Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:			X	17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr			X	Initial when completed: BJM Date: 4/19/17

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

October 30, 2017

Devin Shay
Groundwater & Environmental Services - Syracuse
5 Technology Place, Suite 4
East Syracuse, NY 13057

RE: Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Dear Devin Shay:
Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rachel D Christner

Rachel Christner
rachel.christner@pacelabs.com
724-850-5611
Project Manager

Enclosures

cc: GES Reports - Syracuse, Groundwater & Environmental Services, Inc.
Tim Beaumont, Groundwater & Environmental Services, Inc.
Ms. Cheryl Golden-Walts, Groundwater & Environmental Services, Inc.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30233666001	**MW-1-1017**	Water	10/18/17 10:30	10/20/17 10:00
30233666002	**MW-6-1017**	Water	10/18/17 11:15	10/20/17 10:00
30233666003	**MW-6-MS-1017**	Water	10/18/17 11:15	10/20/17 10:00
30233666004	**MW-6-MSD-1017**	Water	10/18/17 11:15	10/20/17 10:00
30233666005	**MW-9-1017**	Water	10/18/17 08:50	10/20/17 10:00
30233666006	**MW-11-1017**	Water	10/18/17 09:35	10/20/17 10:00
30233666007	**MW-12-1017**	Water	10/18/17 08:10	10/20/17 10:00
30233666008	**MW-20-1017**	Water	10/19/17 09:30	10/20/17 10:00
30233666009	**MW-21-1017**	Water	10/19/17 10:10	10/20/17 10:00
30233666010	**MW-24-1017**	Water	10/19/17 08:45	10/20/17 10:00
30233666011	**Field Duplicate-1017**	Water	10/18/17 00:00	10/20/17 10:00

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30233666001	**MW-1-1017**	EPA 608	CWB	9	PASI-PA
30233666002	**MW-6-1017**	EPA 608	CWB	9	PASI-PA
30233666003	**MW-6-MS-1017**	EPA 608	CWB	9	PASI-PA
30233666004	**MW-6-MSD-1017**	EPA 608	CWB	9	PASI-PA
30233666005	**MW-9-1017**	EPA 608	CWB	9	PASI-PA
30233666006	**MW-11-1017**	EPA 608	CWB	9	PASI-PA
30233666007	**MW-12-1017**	EPA 608	CWB	9	PASI-PA
30233666008	**MW-20-1017**	EPA 608	CWB	9	PASI-PA
30233666009	**MW-21-1017**	EPA 608	CWB	9	PASI-PA
30233666010	**MW-24-1017**	EPA 608	CWB	9	PASI-PA
30233666011	**Field Duplicate-1017**	EPA 608	CWB	9	PASI-PA

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Method: **EPA 608**
Description: 608 GCS PCBs
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 30, 2017

General Information:
11 samples were analyzed for EPA 608. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 608 SF with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 276892

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- BLANK (Lab ID: 1360964)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- LCS (Lab ID: 1360965)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MS (Lab ID: 1360966)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MSD (Lab ID: 1360967)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MW-1-1017 (Lab ID: 30233666001)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MW-11-1017 (Lab ID: 30233666006)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MW-12-1017 (Lab ID: 30233666007)
  - Decachlorobiphenyl (S)
  - PCB-1016 (Aroclor 1016)
  - PCB-1221 (Aroclor 1221)
  - PCB-1232 (Aroclor 1232)
  - PCB-1242 (Aroclor 1242)
  - PCB-1248 (Aroclor 1248)
  - PCB-1254 (Aroclor 1254)
  - PCB-1260 (Aroclor 1260)

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PROJECT NARRATIVE

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Method: **EPA 608**
Description: 608 GCS PCBs
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 30, 2017

QC Batch: 276892

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- Tetrachloro-m-xylene (S)
- MW-20-1017 (Lab ID: 30233666008)
  - Decachlorobiphenyl (S)
  - PCB-1016 (Aroclor 1016)
  - PCB-1221 (Aroclor 1221)
  - PCB-1232 (Aroclor 1232)
  - PCB-1242 (Aroclor 1242)
  - PCB-1248 (Aroclor 1248)
  - PCB-1254 (Aroclor 1254)
  - PCB-1260 (Aroclor 1260)
  - Tetrachloro-m-xylene (S)
- MW-21-1017 (Lab ID: 30233666009)
  - Decachlorobiphenyl (S)
  - PCB-1016 (Aroclor 1016)
  - PCB-1221 (Aroclor 1221)
  - PCB-1232 (Aroclor 1232)
  - PCB-1242 (Aroclor 1242)
  - PCB-1248 (Aroclor 1248)
  - PCB-1254 (Aroclor 1254)
  - PCB-1260 (Aroclor 1260)
  - Tetrachloro-m-xylene (S)
- MW-24-1017 (Lab ID: 30233666010)
  - Decachlorobiphenyl (S)
  - PCB-1016 (Aroclor 1016)
  - PCB-1221 (Aroclor 1221)
  - PCB-1232 (Aroclor 1232)
  - PCB-1242 (Aroclor 1242)
  - PCB-1248 (Aroclor 1248)
  - PCB-1254 (Aroclor 1254)
  - PCB-1260 (Aroclor 1260)
  - Tetrachloro-m-xylene (S)
- MW-6-1017 (Lab ID: 30233666002)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MW-6-MS-1017 (Lab ID: 30233666003)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MW-6-MSD-1017 (Lab ID: 30233666004)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MW-9-1017 (Lab ID: 30233666005)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Method: **EPA 608**
Description: 608 GCS PCBs
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 30, 2017

QC Batch: 276893

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- Field Duplicate-1017 (Lab ID: 30233666011)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 276893

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Analyte Comments:

QC Batch: 276893

1c: A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
- Field Duplicate-1017 (Lab ID: 30233666011)
  - PCB-1016 (Aroclor 1016)
  - PCB-1221 (Aroclor 1221)
  - PCB-1232 (Aroclor 1232)
  - PCB-1242 (Aroclor 1242)
  - PCB-1248 (Aroclor 1248)
  - PCB-1254 (Aroclor 1254)
  - PCB-1260 (Aroclor 1260)

2c: Result reported from front column due to low response for this analyte in the ICV on the rear column.
- LCS (Lab ID: 1360969)
  - PCB-1260 (Aroclor 1260)

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Sample: MW-1-1017 **Lab ID: 30233666001** Collected: 10/18/17 10:30 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.043	1	10/26/17 14:00	10/28/17 01:50	12674-11-2	
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.053	1	10/26/17 14:00	10/28/17 01:50	11104-28-2	
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.055	1	10/26/17 14:00	10/28/17 01:50	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.020	1	10/26/17 14:00	10/28/17 01:50	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.029	1	10/26/17 14:00	10/28/17 01:50	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.026	1	10/26/17 14:00	10/28/17 01:50	11097-69-1	
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.025	1	10/26/17 14:00	10/28/17 01:50	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	88	%	41-107		1	10/26/17 14:00	10/28/17 01:50	877-09-8	CH
Decachlorobiphenyl (S)	65	%	17-118		1	10/26/17 14:00	10/28/17 01:50	2051-24-3	CH

Sample: MW-6-1017 **Lab ID: 30233666002** Collected: 10/18/17 11:15 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.97 U**	ug/L	0.97	0.043	1	10/26/17 14:00	10/28/17 02:11	12674-11-2	
PCB-1221 (Aroclor 1221)	**0.97 U**	ug/L	0.97	0.053	1	10/26/17 14:00	10/28/17 02:11	11104-28-2	
PCB-1232 (Aroclor 1232)	**0.97 U**	ug/L	0.97	0.054	1	10/26/17 14:00	10/28/17 02:11	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.97 U**	ug/L	0.97	0.020	1	10/26/17 14:00	10/28/17 02:11	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.97 U**	ug/L	0.97	0.029	1	10/26/17 14:00	10/28/17 02:11	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.97 U**	ug/L	0.97	0.026	1	10/26/17 14:00	10/28/17 02:11	11097-69-1	
PCB-1260 (Aroclor 1260)	**0.97 U**	ug/L	0.97	0.025	1	10/26/17 14:00	10/28/17 02:11	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	41-107		1	10/26/17 14:00	10/28/17 02:11	877-09-8	CH
Decachlorobiphenyl (S)	66	%	17-118		1	10/26/17 14:00	10/28/17 02:11	2051-24-3	CH

Sample: MW-6-MS-1017 **Lab ID: 30233666003** Collected: 10/18/17 11:15 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**1.3**	ug/L	0.97	0.043	1	10/26/17 14:00	10/28/17 02:32	12674-11-2	
PCB-1221 (Aroclor 1221)	**0.97 U**	ug/L	0.97	0.053	1	10/26/17 14:00	10/28/17 02:32	11104-28-2	
PCB-1232 (Aroclor 1232)	**0.97 U**	ug/L	0.97	0.054	1	10/26/17 14:00	10/28/17 02:32	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.97 U**	ug/L	0.97	0.020	1	10/26/17 14:00	10/28/17 02:32	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.97 U**	ug/L	0.97	0.029	1	10/26/17 14:00	10/28/17 02:32	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.97 U**	ug/L	0.97	0.026	1	10/26/17 14:00	10/28/17 02:32	11097-69-1	
PCB-1260 (Aroclor 1260)	**1.4**	ug/L	0.97	0.025	1	10/26/17 14:00	10/28/17 02:32	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	41-107		1	10/26/17 14:00	10/28/17 02:32	877-09-8	CH
Decachlorobiphenyl (S)	72	%	17-118		1	10/26/17 14:00	10/28/17 02:32	2051-24-3	CH

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Sample: MW-6-MSD-1017 **Lab ID: 30233666004** Collected: 10/18/17 11:15 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**1.2**	ug/L	0.98	0.043	1	10/26/17 14:00	10/28/17 02:52	12674-11-2	
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.053	1	10/26/17 14:00	10/28/17 02:52	11104-28-2	
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.055	1	10/26/17 14:00	10/28/17 02:52	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.020	1	10/26/17 14:00	10/28/17 02:52	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.029	1	10/26/17 14:00	10/28/17 02:52	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.026	1	10/26/17 14:00	10/28/17 02:52	11097-69-1	
PCB-1260 (Aroclor 1260)	**1.4**	ug/L	0.98	0.025	1	10/26/17 14:00	10/28/17 02:52	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	86	%	41-107		1	10/26/17 14:00	10/28/17 02:52	877-09-8	CH
Decachlorobiphenyl (S)	76	%	17-118		1	10/26/17 14:00	10/28/17 02:52	2051-24-3	CH

Sample: MW-9-1017 **Lab ID: 30233666005** Collected: 10/18/17 08:50 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.043	1	10/26/17 14:00	10/28/17 03:12	12674-11-2	
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.053	1	10/26/17 14:00	10/28/17 03:12	11104-28-2	
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.055	1	10/26/17 14:00	10/28/17 03:12	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.020	1	10/26/17 14:00	10/28/17 03:12	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.029	1	10/26/17 14:00	10/28/17 03:12	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.026	1	10/26/17 14:00	10/28/17 03:12	11097-69-1	
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.025	1	10/26/17 14:00	10/28/17 03:12	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	67	%	41-107		1	10/26/17 14:00	10/28/17 03:12	877-09-8	CH
Decachlorobiphenyl (S)	79	%	17-118		1	10/26/17 14:00	10/28/17 03:12	2051-24-3	CH

Sample: MW-11-1017 **Lab ID: 30233666006** Collected: 10/18/17 09:35 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.043	1	10/26/17 14:00	10/28/17 03:33	12674-11-2	
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.053	1	10/26/17 14:00	10/28/17 03:33	11104-28-2	
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.055	1	10/26/17 14:00	10/28/17 03:33	11141-16-5	
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.020	1	10/26/17 14:00	10/28/17 03:33	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.029	1	10/26/17 14:00	10/28/17 03:33	12672-29-6	
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.026	1	10/26/17 14:00	10/28/17 03:33	11097-69-1	
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.025	1	10/26/17 14:00	10/28/17 03:33	11096-82-5	
Surrogates									
Tetrachloro-m-xylene (S)	85	%	41-107		1	10/26/17 14:00	10/28/17 03:33	877-09-8	CH
Decachlorobiphenyl (S)	65	%	17-118		1	10/26/17 14:00	10/28/17 03:33	2051-24-3	CH

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Sample: MW-12-1017 **Lab ID: 30233666007** Collected: 10/18/17 08:10 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.043	1	10/26/17 14:00	10/28/17 05:57	12674-11-2	CH
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.053	1	10/26/17 14:00	10/28/17 05:57	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.055	1	10/26/17 14:00	10/28/17 05:57	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.020	1	10/26/17 14:00	10/28/17 05:57	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.029	1	10/26/17 14:00	10/28/17 05:57	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.026	1	10/26/17 14:00	10/28/17 05:57	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.025	1	10/26/17 14:00	10/28/17 05:57	11096-82-5	CH
Surrogates									
Tetrachloro-m-xylene (S)	78	%	41-107		1	10/26/17 14:00	10/28/17 05:57	877-09-8	CH
Decachlorobiphenyl (S)	85	%	17-118		1	10/26/17 14:00	10/28/17 05:57	2051-24-3	CH

Sample: MW-20-1017 **Lab ID: 30233666008** Collected: 10/19/17 09:30 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.043	1	10/26/17 14:00	10/28/17 06:17	12674-11-2	CH
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.053	1	10/26/17 14:00	10/28/17 06:17	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.055	1	10/26/17 14:00	10/28/17 06:17	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.020	1	10/26/17 14:00	10/28/17 06:17	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.029	1	10/26/17 14:00	10/28/17 06:17	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.026	1	10/26/17 14:00	10/28/17 06:17	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.025	1	10/26/17 14:00	10/28/17 06:17	11096-82-5	CH
Surrogates									
Tetrachloro-m-xylene (S)	78	%	41-107		1	10/26/17 14:00	10/28/17 06:17	877-09-8	CH
Decachlorobiphenyl (S)	88	%	17-118		1	10/26/17 14:00	10/28/17 06:17	2051-24-3	CH

Sample: MW-21-1017 **Lab ID: 30233666009** Collected: 10/19/17 10:10 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.99 U**	ug/L	0.99	0.043	1	10/26/17 14:00	10/28/17 06:38	12674-11-2	CH
PCB-1221 (Aroclor 1221)	**0.99 U**	ug/L	0.99	0.053	1	10/26/17 14:00	10/28/17 06:38	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.99 U**	ug/L	0.99	0.055	1	10/26/17 14:00	10/28/17 06:38	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.99 U**	ug/L	0.99	0.020	1	10/26/17 14:00	10/28/17 06:38	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.99 U**	ug/L	0.99	0.029	1	10/26/17 14:00	10/28/17 06:38	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.99 U**	ug/L	0.99	0.026	1	10/26/17 14:00	10/28/17 06:38	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.99 U**	ug/L	0.99	0.025	1	10/26/17 14:00	10/28/17 06:38	11096-82-5	CH
Surrogates									
Tetrachloro-m-xylene (S)	73	%	41-107		1	10/26/17 14:00	10/28/17 06:38	877-09-8	CH
Decachlorobiphenyl (S)	78	%	17-118		1	10/26/17 14:00	10/28/17 06:38	2051-24-3	CH

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Sample: MW-24-1017 **Lab ID: 30233666010** Collected: 10/19/17 08:45 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.99 U**	ug/L	0.99	0.043	1	10/26/17 14:00	10/28/17 06:58	12674-11-2	CH
PCB-1221 (Aroclor 1221)	**0.99 U**	ug/L	0.99	0.053	1	10/26/17 14:00	10/28/17 06:58	11104-28-2	CH
PCB-1232 (Aroclor 1232)	**0.99 U**	ug/L	0.99	0.055	1	10/26/17 14:00	10/28/17 06:58	11141-16-5	CH
PCB-1242 (Aroclor 1242)	**0.99 U**	ug/L	0.99	0.020	1	10/26/17 14:00	10/28/17 06:58	53469-21-9	CH
PCB-1248 (Aroclor 1248)	**0.99 U**	ug/L	0.99	0.029	1	10/26/17 14:00	10/28/17 06:58	12672-29-6	CH
PCB-1254 (Aroclor 1254)	**0.99 U**	ug/L	0.99	0.026	1	10/26/17 14:00	10/28/17 06:58	11097-69-1	CH
PCB-1260 (Aroclor 1260)	**0.99 U**	ug/L	0.99	0.025	1	10/26/17 14:00	10/28/17 06:58	11096-82-5	CH
Surrogates									
Tetrachloro-m-xylene (S)	71	%	41-107		1	10/26/17 14:00	10/28/17 06:58	877-09-8	CH
Decachlorobiphenyl (S)	85	%	17-118		1	10/26/17 14:00	10/28/17 06:58	2051-24-3	CH

Sample: Field Duplicate-1017 **Lab ID: 30233666011** Collected: 10/18/17 00:00 Received: 10/20/17 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608 GCS PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
PCB-1016 (Aroclor 1016)	**0.98 U**	ug/L	0.98	0.043	1	10/26/17 10:36	10/28/17 00:49	12674-11-2	1c
PCB-1221 (Aroclor 1221)	**0.98 U**	ug/L	0.98	0.053	1	10/26/17 10:36	10/28/17 00:49	11104-28-2	1c
PCB-1232 (Aroclor 1232)	**0.98 U**	ug/L	0.98	0.055	1	10/26/17 10:36	10/28/17 00:49	11141-16-5	1c
PCB-1242 (Aroclor 1242)	**0.98 U**	ug/L	0.98	0.020	1	10/26/17 10:36	10/28/17 00:49	53469-21-9	1c
PCB-1248 (Aroclor 1248)	**0.98 U**	ug/L	0.98	0.029	1	10/26/17 10:36	10/28/17 00:49	12672-29-6	1c
PCB-1254 (Aroclor 1254)	**0.98 U**	ug/L	0.98	0.026	1	10/26/17 10:36	10/28/17 00:49	11097-69-1	1c
PCB-1260 (Aroclor 1260)	**0.98 U**	ug/L	0.98	0.025	1	10/26/17 10:36	10/28/17 00:49	11096-82-5	1c
Surrogates									
Tetrachloro-m-xylene (S)	60	%	41-107		1	10/26/17 10:36	10/28/17 00:49	877-09-8	CH
Decachlorobiphenyl (S)	67	%	17-118		1	10/26/17 10:36	10/28/17 00:49	2051-24-3	CH

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

QC Batch: 276892 Analysis Method: EPA 608
QC Batch Method: EPA 608 SF Analysis Description: 608 GCS PCB
Associated Lab Samples: 30233666001, 30233666002, 30233666003, 30233666004, 30233666005, 30233666006, 30233666007, 30233666008, 30233666009, 30233666010

METHOD BLANK: 1360964 Matrix: Water
Associated Lab Samples: 30233666001, 30233666002, 30233666003, 30233666004, 30233666005, 30233666006, 30233666007, 30233666008, 30233666009, 30233666010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	1.0 U	1.0	0.044	10/28/17 01:09	
PCB-1221 (Aroclor 1221)	ug/L	1.0 U	1.0	0.054	10/28/17 01:09	
PCB-1232 (Aroclor 1232)	ug/L	1.0 U	1.0	0.056	10/28/17 01:09	
PCB-1242 (Aroclor 1242)	ug/L	1.0 U	1.0	0.021	10/28/17 01:09	
PCB-1248 (Aroclor 1248)	ug/L	1.0 U	1.0	0.030	10/28/17 01:09	
PCB-1254 (Aroclor 1254)	ug/L	1.0 U	1.0	0.026	10/28/17 01:09	
PCB-1260 (Aroclor 1260)	ug/L	1.0 U	1.0	0.026	10/28/17 01:09	
Decachlorobiphenyl (S)	%	63	17-118		10/28/17 01:09	CH
Tetrachloro-m-xylene (S)	%	88	41-107		10/28/17 01:09	CH

LABORATORY CONTROL SAMPLE: 1360965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	1.2	1.3	104	60-109	
PCB-1260 (Aroclor 1260)	ug/L	1.2	1.4	111	53-114	
Decachlorobiphenyl (S)	%			59	17-118	CH
Tetrachloro-m-xylene (S)	%			88	41-107	CH

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1360966 1360967

Parameter	Units	30233666002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	0.97 U	1.2	1.2	1.3	1.2	105	102	60-109	2	25	
PCB-1260 (Aroclor 1260)	ug/L	0.97 U	1.2	1.2	1.4	1.4	112	110	53-114	1	25	
Decachlorobiphenyl (S)	%						72	76	17-118			CH
Tetrachloro-m-xylene (S)	%						87	86	41-107			CH

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

QC Batch: 276893 Analysis Method: EPA 608
QC Batch Method: EPA 608 SF Analysis Description: 608 GCS PCB
Associated Lab Samples: 30233666011

METHOD BLANK: 1360968 Matrix: Water
Associated Lab Samples: 30233666011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	1.0 U	1.0	0.044	10/27/17 19:01	
PCB-1221 (Aroclor 1221)	ug/L	1.0 U	1.0	0.054	10/27/17 19:01	
PCB-1232 (Aroclor 1232)	ug/L	1.0 U	1.0	0.056	10/27/17 19:01	
PCB-1242 (Aroclor 1242)	ug/L	1.0 U	1.0	0.021	10/27/17 19:01	
PCB-1248 (Aroclor 1248)	ug/L	1.0 U	1.0	0.030	10/27/17 19:01	
PCB-1254 (Aroclor 1254)	ug/L	1.0 U	1.0	0.026	10/27/17 19:01	
PCB-1260 (Aroclor 1260)	ug/L	1.0 U	1.0	0.026	10/27/17 19:01	
Decachlorobiphenyl (S)	%	50	17-118		10/27/17 19:01	
Tetrachloro-m-xylene (S)	%	79	41-107		10/27/17 19:01	

LABORATORY CONTROL SAMPLE: 1360969

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	1.2	1.1	88	60-109	
PCB-1260 (Aroclor 1260)	ug/L	1.2	1.2	100	53-114	2c
Decachlorobiphenyl (S)	%			36	17-118	
Tetrachloro-m-xylene (S)	%			76	41-107	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: 276893

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
2c	Result reported from front column due to low response for this analyte in the ICV on the rear column.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: National Grid - Buffalo Dewey
Pace Project No.: 30233666

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30233666001	**MW-1-1017**	EPA 608 SF	276892	EPA 608	277042
30233666002	**MW-6-1017**	EPA 608 SF	276892	EPA 608	277042
30233666003	**MW-6-MS-1017**	EPA 608 SF	276892	EPA 608	277042
30233666004	**MW-6-MSD-1017**	EPA 608 SF	276892	EPA 608	277042
30233666005	**MW-9-1017**	EPA 608 SF	276892	EPA 608	277042
30233666006	**MW-11-1017**	EPA 608 SF	276892	EPA 608	277042
30233666007	**MW-12-1017**	EPA 608 SF	276892	EPA 608	277042
30233666008	**MW-20-1017**	EPA 608 SF	276892	EPA 608	277042
30233666009	**MW-21-1017**	EPA 608 SF	276892	EPA 608	277042
30233666010	**MW-24-1017**	EPA 608 SF	276892	EPA 608	277042
30233666011	**Field Duplicate-1017**	EPA 608 SF	276893	EPA 608	276951

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

30233666

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: GES - Syracuse	Report To: Devin Shay (GES) dshay@gesonline.com	Attention: Accounts Payable via email at NERegion@gesonline.com
Address: 5 Technology Place, Suite 4	Report To: Tim Beaumont (GES) tbeaumont@gesonline.com	Company Name: Groundwater & Environmental Services, Inc.
East Syracuse, New York 13057		Address: 5 Technology Place, Suite 4, East Syracuse, NY 13057
Email To: dshay@gesonline.com	Purchase Order No.:	Pace Quote Reference:
Phone: 800.220.3069 x4051 Fax: None	Project Name: National Grid - Buffalo Dewey Avenue Site, Buffalo, NY	Pace Project Manager: Rachel Christner
Requested Due Date/TAT: Standard	Project Number: 06-03000-142140-221-1106	Pace Profile #:

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

SITE LOCATION: GA IL IN MI NC OH SC WI OTHER

Filtered (Y/N)

Requested

WO#: 30233666

30233666

Section D Required Client Information

SAMPLE ID

One Character per box. (A-Z, 0-9 / ,-)

Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED GRAB DATE	COLLECTED GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	PCBs (8082 LL)	Pace Project Number / Lab I.D.
1	MW-1-1017	WT	G			10/18/17	1030		2	2								2	001
2	MW-6-1017	WT	G			10/18/17	1115		2	2								2	002
3	MW-6-MS-1017	WT	G			10/18/17	1115		2	2								2	003
4	MW-6-MSD-1017	WT	G			10/18/17	1115		2	2								2	004
5	MW-9-1017	WT	G			10/18/17	850		2	2								2	005
6	MW-11-1017	WT	G			10/18/17	935		2	2								2	006
7	MW-12-1017	WT	G			10/18/17	810		2	2								2	007
8	MW-20-1017	WT	G			10/18/17	930		2	2								2	008
9	MW-21-1017	WT	G			10/18/17	1010		2	2								2	009
10	MW-24-1017	WT	G			10/18/17	845		2	2								2	010
11	Field Duplicate-1017	WT	G			10/18/17	—		2	2								2	011
12	---END OF RECORD---																		

Additional Comments:

SAMPLES WILL ARRIVE IN # 2 COOLERS.

ltuovila@gesonline.com

Please send reports to: dshay@gesonline.com, tbeaumont@gesonline.com, Syracuselabs@gesonline.com, ges@equisonline.com

SPECIFIC EDD NAME:

NYNGBuffaloDeweyAve-labnumber.28351.EQEDD.zip

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	10/18/17	1030		10/20/17	1000	1.7 Y/N Y/N Y/N
						Y/N Y/N Y/N
						Y/N Y/N Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: TIM BEAUMONT

SIGNATURE of SAMPLER: DATE Signed (MM / DD / YY): 10/18/17

Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact

Page 1 of 1

E-File,(ALLQ020rev.3,31Mar05), 13Jun2005

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: GES Project # 30233666

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label BH

Tracking #: 788136225423 LIMS Login JRM

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Thermometer Used 8 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 1.7 °C Correction Factor: 0.0 °C Final Temp: 1.7 °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: BH 10/20/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:	✓	✓		8. JRM 10/20/17
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			✓	13.
Organic Samples checked for dechlorination:	✓			14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation.	✓			16.
All containers needing preservation are found to be in compliance with EPA recommendation.			✓	
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed BH. Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr			✓	Initial when completed: Date:

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.